EDUCATIONAL REVIEW

JANUARY, 1904

I

CITY SUPERINTENDENT MAXWELL
OF NEW YORK

Within a few weeks the six-year term of service of William H. Maxwell as City Superintendent of Schools in New York will expire. It is the expectation of the city of New York itself, and of the country, that Mr. Maxwell will be re-elected without opposition for a further term of six years; and indeed, in all human probability, for so many subsequent terms as he may be able and willing to serve out. This fact, taken in connection with the magnitude of the New York City school system, the enormous sums expended for its support and for its extension, and the striking changes which have come over it during the past decade, make the present a suitable time to dwell upon the personality and achievements of the man who has borne the brunt of the contest for the improvement of the metropolitan schools, and who now stands as their unchallenged leader.

It is not too much to say that twelve or fifteen years ago the New York City schools were a by-word thruout the United States. The buildings were unsuitable and in very many cases unsanitary, or worse. The teachers were underpaid and almost wholly dependent for appointment and advancement upon the favor of local or ward trustees. The teaching itself was barren and mechanical in the extreme, except where, here and there, a principal or a class teacher had personality strong enough to overcome the traditions in which the schools were bound. The discipline was striking, and from some points of

view efficient; but as the late Colonel Parker remarked on a famous occasion, the silence and the uniform movements of the New York City school children were the silence and the uniformity of death, not of living human beings. In the old city of New York, now the boroughs of Manhattan and the Bronx, there were no high schools, and in consequence the elementary schools were dead at the top. A small number of their pupils were prepared each year by a forcing process for the rigid competitive examinations, by means of which alone admission was secured to the City College for boys, or to the Normal College for girls. Neither of these institutions was a college in any proper sense. Both were nominally collegiate institutions, but their large preparatory departments overweighted the truly collegiate work and left them neither good high schools nor good colleges. In those days the New York schools were not without strong men and strong women in their service. They had some leaders, but no leadership. They stood apart from public opinion and from the interest of the community as a whole, and visitors from the West were continually amazed at the lack of that strong public-school sentiment which was so familiar to them in their own Western cities and towns.

Now all this is changed. The New York City schools of 1888 could not be identified as standing in any relation to the New York City schools of 1903. The schools of 1903 are a center of attraction for the whole United States. They have sprung into a position not only of prominence, but of conspicuous leadership. There are no better public high schools in America than those which now exist in the boroughs of Manhattan and the Bronx. The elementary schools are no longer dead at the top. The teachers are no longer underpaid, but have salaries guaranteed by law, which increase with merit and length of service. Public-school teaching in New York City is a profession, and one which the politician and the wire-puller cannot invade. The teachers are studious and alert, and every classroom reflects the new spirit. Unsuitable and unsanitary buildings have been abandoned or demolished, and as well-designed and well-built structures as are to be found

anywhere in the country have been erected as schoolhouses. Public opinion is no longer inert or antagonistic in public-school matters. It is alive, well-informed, and eager in its support and approval of progressive policies and in criticism and denunciation of policies of reaction.

To what is this change, amounting to a revolution, due? Primarily it is due to the conviction which some years ago laid hold of a number of representative men and women in New York, that the public schools were behind the times and were in danger of becoming a positive disadvantage to the children who attended them. At first only a few voices were heard crying here and there in the wilderness; but, as so often happens, a response was heard to these early challenges and appeals, and before long both the newspaper press, the pulpit, and the public platform came to the aid of the small band of school reformers. Those reformers, both men and women, grew rapidly in numbers and in zeal, and they were well led. Perhaps the editor of the EDUCATIONAL REVIEW could contribute some interesting chapters to the history of all this, if he were willing to do so.

The reformers laid sure hold of the fact that the main trouble with the New York schools was that local interests and local politicians controlled the teaching force, and they devoted their energies to securing legislation that would expel the politician from the school system. The ward politician fought hard for his influence and his patronage. For a long time he was able to rally to his support the school-teachers themselves, on the ground that their interests and his were identical. Year after year appeal was made to the Legislature to destroy the ward-trustee system by means of which the politician held the schools in his grasp. Year after year the desired legislation was denied. Persistence, intelligence, and well-directed idealism finally won the day, and with the assistance of Governor Morton and Mayor Strong the year 1896 saw the abolition of the ward-trustee system. The way was then open to deal with genuine educational problems, and no time was lost in organizing to bring this about. The consolidation act followed and the Greater New York came into being. New and complex

problems of organization and administration were precipitated by this event, but at no time was the main end lost sight of. Temporary compromises had to be made here and there in order to hold what had been won. Brooklyn for a long time resisted the influence which had prevailed in Manhattan. Finally, however, the Brooklyn local committee went the way of the Manhattan ward trustee, and the interests of the schools were confided primarily to a board of experts. With them rested the right of initiative and the direct control of the educational work. Who should lead in the work of this Board?

Six years ago at this very time this question was earnestly discussed. The choice lay between two men, strikingly alike in many points, unlike in many others. They were close personal friends and long-time educational associates. Neither one would permit the use of his name as a candidate for the office of first City Superintendent of Greater New York as against the other. Long and patient consideration followed, and finally Andrew S. Draper, President of the University of Illinois, and formerly State Superintendent of Public Instruction for New York, was invited to take the post. After consideration he declined the honor and united with many others in urging that Mr. William H. Maxwell, the City Superintendent of Schools in Brooklyn, be chosen to the place. In the election which followed Mr. Maxwell was chosen, and it is his first term of service in this conspicuous post which is soon to end. It is worth while to consider in some detail the career of Mr. Maxwell, and to summarize the work which he has done for education.

William Henry Maxwell was born March 5, 1852, in Stewartstown, Ireland. His father was the Rev. John Maxwell, pastor of the Presbyterian Church of Brigh. He was educated in the elementary branches in the local national school and studied classics under his father, and classics, modern languages, and mathematics under the Rev. George Macloskie, now the well-known professor of biology in Princeton University. Mr. Maxwell then entered Queen's College, Galway, winning first place in classics and in English. He obtained his Baccalaureate degree, *cum honoribus,* and received first rank

in Latin and in logic against competitors from the three Queen's Colleges of Ireland. At his final examination for the bachelor's degree in 1872, he received honors in classics and was made prizeman in metaphysics and in English literature.

Mr. Maxwell chose teaching as his profession and began work immediately as sub-master in the Royal Academical Institution, Belfast, where he gave instruction in English, Latin, and Greek. At the same time he served as lecturer in the Ladies' Collegiate Institute. Meanwhile, he pursued post-graduate courses of study in philosophy and political science, which won for him in 1874 the degree of master of arts with added honors in classics. This ended his work as a student in formal educational institutions. He has, however, never abated his scholarly habits, and his extensive reading, study, and writing contributed as much as his distinguished public career toward winning the honorary degrees of doctor of philosophy conferred upon him by St. Lawrence University in 1890 and doctor of laws granted by Columbia University in 1901.

In 1874 Mr. Maxwell came to America with the intention of engaging in educational work. The man who to-day is head of the largest city school system in the world, could not at that time obtain a place as a teacher. He thereupon took up literary work as a reporter on the staff of the New York *Herald* and the *Tribune*.

Later he became associate editor of the *Metropolitan*, a weekly newspaper, and finally, after an apprenticeship on various publications, became managing editor of the Brooklyn *Times*, a position which he held for five years. During the last two years of his editorship he was enabled to re-enter upon the profession of his choice as a teacher and lecturer in the evening high schools of the city of Brooklyn. His work in the classroom soon won for him recognition, and, as a result, in 1882 he was elected Associate Superintendent of Schools by the Brooklyn Board of Education. During the five years in which he served in this capacity, his time was devoted almost exclusively to teaching, examining, and supervising classes in the elementary schools. The chief aim of his service was to substitute for rote and memoriter methods of teaching the

modern scientific systems of instruction, an aim which he was markedly successful in attaining.

In 1887 he was elected Superintendent of Public Instruction in Brooklyn, to succeed the late Calvin Patterson, who at the same time was appointed principal of the Girls' High School.

Mr. Maxwell immediately undertook a systematic study of the entire Brooklyn school system, with a view to its improvement along certain definite lines. He tried to carry out six chief lines of policy, namely, (1) to bring about modern educational methods in the classroom instead of the prevailing and outworn systems of instruction; (2) to remove the striking discrepancies between various schools and to bring all schools in the system up to at least a minimum standard of excellence; (3) to encourage promotion for merit instead of for influence, by requiring the higher licenses for the better-paid positions; (4) to establish and encourage a well-organized system of secondary education; (5) to introduce into the elementary school course some of the newer studies, particularly manual training; and (6) to build up kindergartens as adjuncts to the elementary-school system.

In all of these undertakings, Mr. Maxwell's success was noteworthy, but perhaps most striking was the result of his efforts for the establishment of a well-ordered system of secondary education. When he became the Superintendent of Schools in Brooklyn there was in that city but one school offering anything like secondary instruction. This was the Central Grammar School, which offered a two-year course, or a three-year course, beyond the elementary system. Under Mr. Maxwell's leadership this school was developed into the Boys' High School and the Girls' High School. Later came the establishment of the Manual Training High School, one of the first to be opened in this country. The opening of the Erasmus Hall High School was another step forward. Meanwhile in the Boys' High School a commercial course had been developed, and this may fairly be regarded as the beginning of the present Commercial High School. In other words, Mr. Maxwell came to the head of the system when there was not a single fully developed high school in it, and when he left it he had

secured the establishment of four great high schools and had sown the seed for a fifth institution.

In the elementary schools, besides securing the introduction of instruction in manual training, with a view to teaching the child to use his hands and muscles in elementary artisanship as a supplement to intellectual work, Mr. Maxwell practically led the school authorities of this country in requiring higher classes in elementary schools to study masterpieces of literature as a substitute for the old, scrappy, and unsatisfactory readers designed for older pupils. This experiment, which Mr. Maxwell was one of the first to try, has since received general recognition, and such reading is now very general thruout the country.

It was during this period also that Mr. Maxwell aided the elementary schools materially by devising the system of morning and afternoon classes, which enabled the school authorities to use one classroom for two primary classes each day. This measure was intended only as a temporary expedient, but as a result of it, to-day thousands of children are now in school who otherwise would be on the streets, receiving no instruction whatever.

In his desire to encourage teachers to keep pace with new thought and modern discovery in education thru the stimulus of limiting higher salaries to those who could show that they were possessed of high attainments, Mr. Maxwell had singular success, so that Brooklyn was known as a city whose teachers as a body were earnest students of their profession.

His greatest achievement during this period, however, affected not only Brooklyn, but also the public schools of the entire State. This was the introduction by him into the State Council of Superintendents of the resolution which resulted in the passage by the Legislature of the bill which, when signed in 1895 by Governor Morton, required that all teachers thereafter licensed or appointed to the public schools in any city of New York State must be graduates of a recognized high school and also of a school for the professional training of teachers, or from institutions of equal or higher rank offering similar instruction. For this action Mr. Maxwell received a formal

vote of thanks from the National Educational Association at its meeting held in Denver in 1895. The resolution then adopted reads as follows:

Resolved, That since we believe that the intelligent teaching of children can be secured only by the intelligent training of teachers, we heartily commend the efforts made in all parts of the country, by means of round tables, teachers' institutes, and summer schools, to increase the efficiency of the force already in the field. But, at best, the training acquired by these means, in the nature of things, must be inadequate. Hence we urge upon the legislatures of the several States, that they make provision for the establishment of thoroly equipped normal schools in sufficient numbers to make it possible that all of the teachers of the public schools may receive such training as the transcendent interests committed to their charge imperatively demand, so that in the near future none but well-trained teachers shall be permitted to enter upon the work of instructing children. In this connection we congratulate our friend and co-worker, Supt. W. H. Maxwell, of Brooklyn, upon the enactment into law of the bill drawn by him so many years ago, and for which he has so long and faithfully labored. We also congratulate His Excellency Governor Morton, that he has risen to his high privilege of signing this bill and thus making it a law that "no person shall be employed or licensed to teach in the primary and grammar schools of any city of the State who has not had successful experience in teaching for at least three years, or, in lieu thereof, has not completed a three-years' course in, and graduated from, a high school or academy having a course of study of not less than three years, approved by the State Superintendent of Public Instruction, or from some institution of learning of equal or higher rank, approved by the same authority, and who, subsequently to such graduation, has not graduated from a school or class for the professional training of teachers having a course of study of not less than thirty-eight weeks, approved by the State Superintendent of Public Instruction." We congratulate the Empire State that it has such loyally true men to stand for the welfare of its children.[1]

Four times Mr. Maxwell was re-elected City Superintendent of the Brooklyn Schools. Each time there was strong opposition to his election from the politicians whom he declined to serve, and from disgruntled principals and teachers who saw the handwriting on the wall in case his high standards were insisted upon as a permanent policy. Without any political knowledge himself and without wire-pulling, Mr. Maxwell astonished the community and even his friends by succeeding each time in discomfiting his enemies and his critics. He won by sheer force of his ability and his character, and he made for

[1] Proceedings of the National Educational Association for 1895, p. 33, 34.

himself, as well as for the schools under his charge, an enviable reputation that increased year by year. So that when, in 1898, Mr. Maxwell was chosen to be City Superintendent of Schools of Greater New York under the terms of the new charter, the fitness of the choice was everywhere conceded and the choice itself applauded. His new office carried with it the chairmanship of the Board of Examiners and gave the Superintendent the right to fix the minimum qualifications for all licenses to teach in the local public schools. Beyond these powers, the charter, which specifically prohibited the Superintendent from interfering in the actual conduct of any public school, allowed that officer little room for action. Had Mr. Maxwell, therefore, been a person of less inspiring and commanding character and less determined in his pursuit of what he believed to be right, he would have become at this stage a mere executive nonentity. His first move was naturally to discharge all the functions conferred upon him by the charter. He raised the requirements for licenses to teach far beyond any previous standards prevailing in the old City of New York. He proceeded to cancel, in so far as the law gave him power, certificates of politically appointed non-competents, inherited by the absorption of what before consolidation were country school districts. He then introduced a system of examinations for license which, while imposing difficult tests, were then, and have always been, beyond suspicion so far as honesty and fairness are concerned. He did not long remain content, however, with doing the things prescribed by the charter for him to do, and it was here that his determination and wide knowledge became singularly effective. He exerted every effort to induce Mayor Strong's Board of Education to introduce the merit system of promotion and appointment, from which dates the real beginning of the plan of limiting higher salaried positions to teach in the City of New York to those possessed of higher qualifications.

Soon after his election, however, the administration changed, and for some years Mr. Maxwell had the difficult task of winning over to his point of view, or forcing to his way of thinking, a hostile Board of Education. His first step caused a

great outcry. In his first annual report he took occasion to expose and score mercilessly the corrupt and degrading process incidental to appointment of teachers by local committees without reference to order of standing on eligible lists. The Board of Education for a time refused to publish this report, but finally issued it with a prefatory page denying Mr. Maxwell's allegations. The public press could not be similarly treated, however, and their criticism of the system condemned by Mr. Maxwell contributed as much as anything else, probably, to the passing of a new school law, which wiped out the old borough school boards and with them the Brooklyn local-committee system of personal appointment to public office. Mr. Maxwell's course was somewhat similar when, in the face of a sharp attack on secondary education by Mayor Robert A. Van Wyck and Comptroller Bird S. Coler, he persistently advocated the opening of more high schools, especially a high school of commerce which had formed the text of his well-known address before the Chamber of Commerce of New York City. In the end, Mr. Maxwell won over the hostile Board of Education to his belief in secondary education. As a result this body began the erection of three high-school buildings in the boroughs of Manhattan and the Bronx and also contracted for the erection of a new high-school building in Long Island City.

It was during this period that Mr. Maxwell demonstrated his fearlessness in standing for his honest beliefs. Practically alone in his position among the higher school officials, Mr. Maxwell advocated in person at Albany the passage of the Davis salary law, which guaranteed every teacher in New York City a living wage and a steady annual increment up to a comfortable income. The sole determinants for promotion under this measure were merit and fitness. As a result of these provisions, the bill promised to place the salary question beyond the whim of changing city administrations and to elevate appointments and promotions above the defiling touch of the politician. It was this promise of the Davis law—a promise which since has been amply fulfilled—which was the important factor in leading Mr. Maxwell to support the measure. He appeared in its behalf before Governor Roose-

velt in opposition to a representative of the Corporation Counsel, the president of the Board of Education, and some of the leading members of that body. His advocacy of the bill contributed largely to its passage by the Legislature and its signature by Governor Roosevelt, in spite of the veto of Mayor Van Wyck. The scene at this hearing is described by a teacher in the *School journal* of October 31, 1903, in the following words:

> One who was present in the executive chamber—when, before Theodore Roosevelt, governor, appeared against the bill a dozen of the best lawyers and hardest hitters of the school board and for the bill one to whom they referred as their employee, Wm. H. Maxwell—says it was the most dramatic scene the history of American education can boast. To suggest that Maxwell did this to curry favor with the teaching force is the veriest rot, and his subsequent acts prove it beyond question.
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> On the passage of the Davis law schedules Maxwell began using them in a way that decreased his popularity with many teachers. He practically said this law was not passed for them, but for the schools. He used it as a lever for raising the mental and professional efficiency of teachers. He has stood with a club at every gate leading to higher salaries, and has beaten back friends and foes alike who are not ready to show the equipment demanded.

Besides prescribing minimum salary schedules with steady increments, the Davis law contained also the so-called four-mill provision, which required the Board of Estimate to allow for teachers' salaries a sum not less than the equivalent of four mills on every dollar of taxable valuation. This provision, which Mr. Maxwell favored heartily, insured to the public schools a steadily growing fund which permitted the beginning of new educational ventures and the carrying out of experiments without fear of interruption from the false economy or educational ignorance of shifting city administrations. An interesting fact in connection with this provision is that Mr. Maxwell, himself, first advanced this proposition in the fall of 1898 in an address delivered in connection with the system of free lectures to the people in Cooper Union. The proposition was taken up at once by Senator John Ford and introduced into the Legislature in 1898-99. It failed of adoption, however, until incorporated as one of the beneficent features of the Davis law.

As another measure to emancipate the schools completely from the politician, Mr. Maxwell secured the incorporation in the new charter of a provision which makes mandatory civil-service methods of appointment to nearly every position in New York City schools.

In February, 1902, the educational chapter of the revised charter went into effect, and finally New York had an almost ideal system of school administration. The revised charter did away at once with the anomalous condition where the City Superintendent of Schools, having no right to improve directly the instruction in the schools under his charge, was forced to use the indirect method of criticism and suggestion in an annual report. The new charter, however, made the City Superintendent of Schools actually the scholastic head of the city school system. In this capacity Mr. Maxwell found it possible to put into effect almost immediately many of his cherished plans for public instruction.

In one of his first acts during the early part of 1902, Mr. Maxwell demonstrated the continuance of his belief in high schools by organizing the High School of Commerce in temporary quarters, so that the school was in active operation when its new building was completed. A few months later he led a movement which ended in the establishment under similar conditions of the Girls' Technical High School, an institution which, while giving girls a thoro training for business in the several trades and arts, emphasizes particularly the importance of home-making by insistence upon strongly organized courses in domestic science. In his annual report for this year, City Superintendent Maxwell advocated also the opening of a manual-training high school in Manhattan borough.

The City Superintendent's attention next was turned to the strengthening of the system of licenses to teach. Requirements for the important certificates were raised considerably. Broader scholastic training and more extensive study of the science of teaching, especially the application of psychology and logic to instruction, were demanded of prospective teachers. A new license, that for promotion, obtainable only after specialized study on the part of successful teachers, was made a

prerequisite to appointment to the highest salary in grade positions. Possibly the most significant change in the licensing system, however, was the new rule requiring appointment in order of standing on eligible lists of all teachers selected for positions in the summer schools and evening schools. These appointments, for some years back, had been made irrespective of standing at examination, with the natural result that influence centered its effort to secure recognition in these two departments. The new plan, coupled with the fact that the requirements for these licenses were raised, resulted at once in more effective work in these departments of instruction. In connection with these changes Mr. Maxwell advocated wide extension of this division of instruction and thru new courses of study and the application of better methods, particularly to the teaching of English to foreigners, brought the actual character of the teaching in these special schools up to a higher plane of efficiency.

The Board of Superintendents, of which Mr. Maxwell, as City Superintendent, is chairman, under his leadership turned its attention to the improvement of the regular elementary schools. In the interests of economy, excessive supervision and the appointment of highly paid teachers to nominal supervisory positions were abolished. This consolidation, by putting the supervision of all classes of the same grade under one principal instead of having classes of the same grade in two parts of one building under separate principals, made it possible frequently to consolidate small classes of the same grade which before had only partially filled two rooms. By putting both classes into one room, which then it fully occupied, one of the two rooms is released for the use of some other grade with a large attendance, the pupils in which otherwise would be given only part-time instruction.

The next step for the improvement of the elementary schools was a measure for bringing all of these institutions of the city to a uniform standard of work thru the requirement of the same qualifications for graduation and for entrance into the high schools. In order to obviate the undesirable results of formal examination of pupils averaging fourteen years of age,

a plan predicating graduation upon the certification by the principal and superintendent of the pupil's ability based upon a careful review of the child's school history and actual attainments was introduced. The test was aimed rather to find whether the child actually could do the things to be expected of the average graduate of an elementary school than to estimate his ability to remember text-books or to pass thru a quantity of prescribed work. Applied knowledge was the crux of this test. As a result of this system the grammar-school diploma is coming to have a real value in the commercial world as a certificate of the child's ability to do certain things.

This measure was followed by a new course of study which prescribed an eight-year curriculum for all boroughs and thereby did away with the old plan, which permitted Manhattan to have an overcrowded seven-year course while Brooklyn, Queens, and Richmond offered more liberal eight-year courses of study. This new course, besides embodying all the new discoveries in education, giving due importance to the cultural branches such as drawing, music, and gymnastics, and practical subjects such as shopwork, cooking, and sewing, lays great stress also on ethical training. In some respects this course contains novel features. One of these is the substitution in the seventh year of elementary algebra and geometry for needless repetition of arithmetic. This little excursion into algebra and geometry emphasizes particularly the thoro review of arithmetic which follows in the eighth year, cultivates the child's reasoning powers, and by imparting a knowledge of the employment of the equation, extends his ability to use his arithmetical experience. Similarly in the seventh year of the course, English history is substituted for American history, partly with a view to relieving the child of the monotony of repetition which sometimes militates against interest in history, but more especially with the object of connecting American history with that of the parent country and contributing largely to a sense of proportion in history. This course provides also in the last year a series of carefully guarded electives. The choice of stenography, Latin, German, or French, or some other modern language, is offered. The educational authori-

ties, however, have reserved for themselves the right in foreign-speaking neighborhoods of the city, to substitute for these electives added work in English. In this way the course is made elastic and is easily adaptable to the needs of individual schools, which differ widely because of the cosmopolitan character of the people to whom they minister. In order to make the work of this course especially effective, departmental teaching has been encouraged, with the result that the teachers, instead of attempting to give instruction in all branches indifferently in the upper grades, are now specializing in subjects for which they have the greatest teaching aptitude. To supplement the course of study, which is in skeleton form, extensive syllabuses covering the grade work and providing amplified suggestion as to methods to be pursued have been issued to each teacher. The same careful attention which has been given to the final year of the elementary course has been bestowed upon its beginning, with the result that the kindergarten system has been increased greatly within the last few months. At the same time extensive experiments looking to the testing, with a view to general introduction, of classes for deficient or abnormal children, were inaugurated. In many primary classes, furthermore, the instruction was greatly improved by the entire wiping out of the plan, so cruel to the teacher and so unjust to the pupil, of requiring an instructor to teach one part-time class in the forenoon and a second and different class after the noon recess. Each class, under the new régime, has been given its fresh and unwearied teacher. At the same time economy was effected by utilizing thru proper organization many vacant rooms and sittings heretofore allowed to be idle. As the result of this plan, under Mr. Maxwell's leadership in 1902-03, for the first time in recent years, no child over six years of age was refused admission to the public schools. This fact was made possible in great part thru a wise application of Mr. Maxwell's morning and afternoon class plan, thru which probably 40,000 children were kept off the streets. Further economy was effected by putting school buildings to use to a greater extent than ever before during the summer, after school hours and during the evenings, as summer schools

and playgrounds, roof-concert places, baths, etc. In this way much valuable city property was kept from lying idle and made useful to the citizens who had paid for it.

In the high schools uniformity of standard was promoted thru the adoption of a single examination for graduation from all of the secondary schools in the city. This has made patent weak places in these upper schools and has made possible remedial measures for securing a high standard of instruction thruout the several boroughs. In June, 1902, was adopted the new uniform course of study for high schools which became effective September, 1902. The chief feature of interest in connection with this course is that it offers a judicious combination of the old fixed course for all pupils and the purely elective system.

During the winter of 1903 Mr. Maxwell began to pay especial attention to the enforcement of the compulsory education laws then existent and to securing more effective statutes compelling attendance upon school and preventing child labor. As a member of the Child Labor Committee he aided in drafting and in forwarding the adoption of the well-known newsboy and street-trades law, which prevents the employment of young children in such work during school hours and at night. As a member of the Council of Superintendents also, he drafted in great part and thru personal effort secured the passage of the new compulsory education law, which raises the age of attendance upon school from twelve to fourteen years and requires that children between fourteen and sixteen years of age who have not mastered the common branches shall attend an evening school. Severe penalties are imposed for employers who violate this provision. Mr. Maxwell then secured a large increase in the force of attendance officers and by careful reorganization thru his representative in charge, added materially to the efficiency of this branch of the public service and secured a reduction in a number of cases of truancy.

Mr. Maxwell has been prominent in the councils of many of the State and national educational associations. He has been president of the State Council of Superintendents, and president of the Department of Superintendence of the National

Educational Association. He was a member of the Conference on English reporting to the Committee of Ten, presided over by President Eliot of Harvard, which had in charge the development of the well-known report on the course of study in secondary schools. He was chairman of the Committee of Fifteen appointed by the National Department of Superintendence. This committee, it will be remembered, presented the three famous reports: (a) on the organization of city school systems; (b) the correlation of studies; and (c) the training of teachers. He served also on the Committee on English appointed by the Association of Colleges and High Schools for the Middle States and Maryland, whose recommendations have since been ratified by practically every college in this country and have done much to revolutionize the teaching of English in high schools. In 1903 he was appointed chairman of the Committee on Instruction in Municipal Government in American Educational Institutions, upon the authority of the National Municipal League. This committee has for its object the preparation of suggestive courses, the indication of methods of teaching civics to children thruout the country.

Mr. Maxwell has been a trustee and fellow of the Brooklyn Institute of Arts and Sciences. He is the author of a number of text-books on English and many addresses widely known in this country. For a number of years he was associate editor of the EDUCATIONAL REVIEW, in the founding of which he gave important assistance. During the absence from the country of the editor-in-chief in 1893, Mr. Maxwell conducted the REVIEW in addition to discharging his own very responsible duties as city superintendent in Brooklyn. The pressure of his own work compelled him to withdraw from the editorial board of the REVIEW in 1896.

In barest summary and without adornment, these are the facts in the present history and educational career of one of the most effective leaders ever identified with public education in America. Mr. Maxwell has what may be called the educational instinct. He sees and feels what ought to be done, as well as knows how to do it. He is intellectually uncompromising and

works his way from premise to conclusion with extraordinary directness and force. He has no fear of the consequences of a right action or of a sound principle, and his moral courage is such that he hardly knows the meaning of personal criticism or vexatious opposition. Of both of these he has met with plenty; but they have made no impression upon him and have never diverted him from his purposes. Mr. Maxwell is in the prime of life and endowed with extraordinary health and vigor. He is a tremendous worker, and requires work from all who are associated with him. He bears his heavy responsibilities not lightly, perhaps, but, nevertheless, without being overborne by them. It has not been possible either to tempt or to drive him, and there is reason to believe that the foundations of a sound and modern school system are so securely laid in the city of New York that no possible change of political weather can shake them or seriously interfere with the structure which is rising upon them.

No one outside of New York has any realization of the revolution which has gone on in the public-school system. The fact that this revolution has been possible, and that it has been so beneficent, is the greatest and most significant event in our later educational history.

II

RECENT EDUCATIONAL PROGRESS IN FRANCE[1]

Never still, always seeking progress, France seems not yet to have succeeded in settling for good her system of public education. The year just gone has brought up again, and amid great excitement, the problem of freedom in teaching; the question whether the right to teach ought to be recognized as belonging to every citizen, whatever opinion he may hold, whether he be a layman, an ecclesiastic, or a congregationalist [*congréganiste*]; or whether, on the contrary, the right ought to be kept exclusively for the secular state and its representatives.

Until now, under the Republic as well as under the Empire, the law had allowed, beside establishments of the state, free establishments in the three grades of instruction—the primary, the secondary, and the highest. This seemed to be the logical and necessary consequence of the principles of liberty upon which republican rule rests. But a great danger has arisen, to wit, that the instruction given in the free schools, especially those directed by the innumerable congregations which depend on the Catholic Church, was not abreast of modern ideas; that in such schools as these the youthful generations were being reared not only according to superannuated methods, but also in a spirit of rebellious hatred of democratic institutions. Two Frances were growing up side by side; the one open-minded, freed from old-fashioned prejudices, and with eyes fixed on the future; the other stubborn against progress, firmly set in its longing for the past.

It was partly to ward off this danger that the Waldeck-Rousseau ministry introduced and carried, in 1901, the Associations Bill, which had, among other purposes, that of checking the rising wave of the religious congregations, of which it may

[1] Translated from the author's manuscript by Richard Thayer Holbrook, Tutor in Romance Languages in Columbia University.

be said that, especially in the last few years, they had been swarming and multiplying beyond all measure. The law of 1901 specified that only those congregations expressly to be authorized by the State should be upheld and have the right to live. Some, many even, were authorized already and had been so for a long while. But many others had founded their houses on the sly, without authorization, without lawful investiture from any government. These are the congregations aimed at by the law of 1901. In conformity with that law the greater part have solicited authorization, but parliament, in harmony with the government, has withheld it altogether from nearly all. Thereupon, several religious societies have had to break up and to forego continuing collectively their works of charity, or their industrial undertakings—witness the Carthusians—or, finally, their educational function. The Combes cabinet, upon which devolved the enforcement of the law of 1901, and which has enforced it with vigor and rigor—some say with excessive rigor, yet, at any rate, it has only carried out faithfully the wishes of parliament—the Combes cabinet has closed about 10,000 primary schools and a few secondary establishments. Thus the law has been obeyed, but we must add that it has been so only in appearance. The congregations to which authorization has been refused have feigned to respect the law, but in truth they have evaded it. They closed their schools, but opened them again the next morning. How manned? By the same persons, differently clothed in the garb of laymen. The monks, fathers, and friars have been relieved of their vows by their superiors and by their bishops in such wise that the change was only one of dress. They have traded the congregationalist's gown for the frock coat or waistcoat, and the former teaching body has reappeared, if not in the same school, at any rate in one near by, with different apparel and often with mustaches instead of the shaven face, but with the same mind and the same tendencies; which proves that it is not easy to grapple with the Church, gifted as she is in politics and fertile in expedients, skillful in fitting herself to circumstances and in using trickery to maintain her power.

But matters will not stop here. The leaders of present politics

in France have seen with disfavor, and not without anger, that the effort to get satisfaction out of the body of congregationalist teachers, in part at least, had not brought forth the results hoped for. And it is to be feared that the iritation caused by that first disappointment may give chance of success to the extremists, and end in violent resolutions. Already in the press, in meetings, in congresses, and in the ministers' speeches before the actual opening of parliamentary debate, one may discern a drift of opinion tending to the absolute suppression of freedom in teaching.

Without doubt the moderate spirits themselves wish the state to affirm that it alone holds the right to teach, but they ask that the state be enabled to confer this right on whomsoever it will, within well-defined limits, laying upon its delegates the obligation of furnishing by their degrees, or their standing, the necessary guarantees. A stern supervision exercised by state inspectors would make possible the assurance that the teaching done by private schoolmasters is adequate to youthful needs and not in contradiction to the principles of a republican society. As for ourselves, we should gladly agree to this system of limited freedom, which would exclude nobody, and in which ecclesiastics, secular clergy, and even the regular clergy, the congregationalists, provided that they were authorized by express delegation of the State, should be allowed to continue their educational function.

But this régime of relative liberty is far from being welcome in advanced political circles. And the most illiberal opinions are coming to light in a crescendo which must disturb the friends of liberty.

A first step toward restriction would be, as the most fervent demand, to make no more distinctions between authorized and non-authorized congregations, to do away with every kind of congregation, even those which, like the congregation of the Brothers of the Christian Doctrine, founded in the seventeenth century by Lasalle, still cover France with a mighty network of schools. But they are going further. It is not only from the congregations, from those societies founded, according to the expression of M. Buisson, on "a bond of serfdom,"

that other politicians wish to withdraw the right to teach; it is from all ecclesiastics, to whatever religion they may belong, from whosoever wears the priest's gown—Catholics, Jews, or Protestants. And the relentless logic of our reformers leads them to a conclusion more radical still, the forbidding of teaching even by laymen, if they are merely individuals without official mandate, if they are not officials appointed by the state, and directly invested thereby with the privilege of teaching.

In other words, that striving towards liberty which was thought to be a warrant for the existence of the Republic would result in a monopoly of teaching, in an educational dictatorship of the state. There would no longer be any open school, any occupied chair save those in which teaching would be done by professors licensed by the state. As was said at the Radical and Radical-Socialist Congress at Marseilles last October, instruction of every degree would become a "national service." There would be only one teacher left, the state, "which" (as was said furthermore at the same congress) "is absolutely bound to give to all the nation's children a secular, rational, and republican education."

It is hard to foresee as yet what will come of all this agitation. Yet it is scarcely probable that an absolute state monopoly will be the winning solution in the discussions which will be opened in Parliament. They will set aside what remains of the Imperial law of 1852, the law called the "Falloux Bill," from the name of the minister of public education who got it voted fifty years ago, and who had reserved in it all kinds of special favors for private teachers. They will strengthen state inspection and control. They will demand new guarantees of capacity in private teachers. But we hope they will not do away with free teaching. Not only will it be difficult, we hope, to find a majority in the Chamber of Deputies and in the Senate to deny the principle of freedom in teaching, but material difficulties added to moral grounds will be such as to make Parliament hesitate. The money question will compel reflection. It would take hundreds of millions to build the schools and colleges in which henceforward the children of the country

might be received. And it is not only the first outlays which would constitute a grave hindrance in establishing a state monopoly of education. Where would they find at a moment's notice the lay teaching body which would be needed to replace either in the primary schools or in the institutions of secondary instruction the present force of the schools and private colleges?

Having been absorbed with those great questions which disturb and excite men's minds, the Department of Education have, in the course of this year, introduced no important innovations in the working of the primary schools. They are planing a modification of normal-school programs, but nothing on this head has yet been done. It is well known how spiritedly our schoolmasters and schoolmistresses complain of the smallness of their pay. Some improvements have already been voted, for example: the *instituteur stagiaire* (or probationary teacher) will receive henceforward 100 francs more, or 1000 francs a year. This is still very little. Other plans are under consideration which will sanction more improvements; for instance, that which will insure advancement, promotion from one class to another, an increase of salary, at the end of a certain number of years and only by virtue of length of service.

The elementary primary school with us has much to achieve in the line of progress, were it only from the point of view of the attendance and faithfulness of the pupils. We have not yet contrived a compulsory law sufficiently energetic and efficacious to make children from six to twelve years of age attend school regularly. But a greater failing still, the most serious gap in our educational system, is that for the great majority, for almost all our primary pupils, instruction ends on their leaving the elementary school. To be sure, we have a pretty large number of higher primary schools open for complementary instruction to boys and girls from 12 to 15 years of age, but out of several million pupils who have attended more or less the elementary primary school how many are there who enter the higher primary school? Less than 50,000. The *Ecoles de continuation* [*Fortbildungschulen*, or "night schools"] which have long been

established in Germany do not yet exist among us. Here is a huge want which preoccupies all minds anxious about the future of our democracy. M. Buisson, former director of primary education, now deputy for the Seine, remarked on this fact in a recent speech: "The Republic must certainly decide soon to make obligatory for children from 13 to 16 years old, for instance, a few hours of study every week; I mean hours of study taken, not from their resting time and added to an exhausting day of toil, but taken from time in the workshop."

It is to be hoped that the day will come soon when it shall be understood furthermore that the work of the primary school, sketched rapidly in a few years, will be of little avail if it is not continued; that the schoolboy of 12 years, even tho provided with a certificate of private studies, is far from having learned all that he needs in order to be some day a man and a citizen; that instead of abandoning him to intellectual inaction as soon as he enters the workshop, during the critical years of youth, there is due to him the rounding out of moral culture and the completion of his training.

But while we wait for the lawmakers' decision to make that complementary primary instruction obligatory, and for regularly organized courses to be opened for all children who have received on their school benches only an elementary instruction, we must own that during the last few years great efforts have been made, thanks to happy initiatives, to fill up that gap and to assure the immediate future of the schools. This is what we call *le mouvement post-scolaire*, with all the institutions related to it—courses for adults, lectures, and alumni associations. In this movement are co-operating not only the teachers, who valiantly add to their day's work the supplementary task of courses and lectures in the evening, but also well-minded citizens, physicians, lawyers, engineers, and teachers from the other grades of public teaching, who make themselves willing helpers in the education of the people.

The results obtained, thanks to the co-operation of all these willing workers, are quite remarkable. In 1895 there were to be counted in France only 8288 courses for adults. In 1903 the number rose to 44,428 courses, of which 29,074 are for

boys, and 15,341 for girls. These courses have been followed regularly during the past year by 528,442 boys and 215,240 girls. They offer, furthermore, a great variety in organization. Some are meant for the illiterate, for those who scarcely know how to read and write (we have some such still). Others are courses for review and improvement, in which the teachers return to and complete the subjects taught in the elementary schools. Others, finally, are special, technical, commercial, industrial, agricultural courses fitted to the local needs of diverse regions. But the courses for adults are not the only form of post-scholastic teaching as practiced everywhere on French territory. Popular instruction is given, also, in a very great number of isolated lectures in which are treated the most varied subjects—history, geography, and sciences, as well as political and social economy. The popular lectures in 1903 rose to the number of 117,350. They brought together more than 3,000,000 hearers. Much use is made in them of projections on screens and of photographic views, and the public, in the towns as in the villages, has taken a great liking to these meetings, which are at once recreative and instructive.

It would take too long to enumerate all the societies for popular instruction which have been organized to spread scientific knowledge and to work for the social education of the nation. We will only point out that they have manifested themselves mainly in two forms: Popular Universities, and Alumni Associations in the Primary Schools. With a title perhaps slightly ambitious, the Popular Universities (there were 75 in 1902) propose to gather a certain number of teachers and scholars to lay the foundations of an integral system of education. But it does not seem as if these groupings, which sometimes have the weakness of being only political associations and sectarian in spirit, had much chance of developing. Far more important and numerous are the Alumni Associations. Here we are not in the presence of a fictitious and off-hand grouping; these are the former pupils, male and female, who, having entered upon life, wish to meet in order to draw closer the bonds of fellowship already formed in classes in which they had the same

training, in which they were reared in the same spirit, in the close fellowship of the same ideas and the same feelings. These associations are founded oftenest by the collaboration of the teachers and of the head of the school, who sometimes is precisely the one from whom the former pupils got their instruction. They aim to uphold the school, to recruit scholars for it, as well as to get up for the sake of their own members festivities, concerts, theatricals, recreations of every kind, or instructive lectures. It would be ideal if about each school there should form itself a society of this kind which should continue in the life outside among those who compose it the friendship, the unity, the solidarity, the mutual help, whose first seeds were sown in the school. And this ideal is not beyond realization. In truth, it is quite wonderful how quickly these friendly societies have grown up. In 1895 there were but 56; in 1903 they numbered 5913, of which 4000 are for boys and 1913 for girls. It is a guard of honor which is protecting the school and its scholars to-day; it is at the same time a focus of action which brings together in a single effort students once widely scattered.

The noteworthy fact in this great movement for popular instruction and intellectual emancipation is that about half the cost of these various undertakings is defrayed by subscriptions, gifts, and voluntary fees from their members. The state gives honorific rewards to the teachers, and the ordinary citizens who have specially distinguished themselves thru their devotion and their zeal in post-scholastic work, but it contributes only 300,000 francs for expenses so far as the courses for adults are concerned. The general councils of the departments and the municipal councils of the communes spend some 2,250,000 francs to subsidize the various works. The remainder of the outlay falls upon the members. The amount of fees, collections, and gifts in 1903 was more than 2,500,000 francs.

That this movement of private initiative may last and gather strength is earnestly to be hoped for. If it developed, it would perhaps enable the state to avoid the heavy outlays of money which a legal and official organization of instruction for adults would necessitate. At the present moment, in every city and in

almost every village of France there is a little hearth to whose glow the child of the people can come for enlightenment and warmth, there completing and strengthening the knowledge gained at school.

It is quite too early to judge the results of the reform of 1902, which so deeply modified the conditions and the programs of our secondary teaching. We have reached only our first year of trial. Whatever may have been the willingness of teachers, and their eagerness to conform to the new rules, it is clear that having been called upon, partially at least, to teach in a new way—when, for instance, a professor of rhetoric, who was growing pale with his pupils over Greek and Latin texts, has no longer anything to do but to teach French—it is clear that the professors of our lycées and of our colleges have had to grope their way, and that they have not at the outset reached perfection in their methods. It will need time for the teaching body to rise to the new order of things, and for tools, sometimes antiquated and bent, in a sense, by old habits, to gain the pliability necessary for new uses.

It is not possible, either, to know from the statistics of this first year of the new system how and in what proportions the pupils of the lycées and the colleges will be distributed among the various branches of secondary education; sections A and B of the first cycle, from the *sexta* to the *tertia* inclusively, and the four sections A, B, C, D of the second cycle. It is true enough that parents and pupils, having been invited for the first time to make a choice, after the *secunda*, among four different directions, have experienced some embarrassment. As might happen in a railway station where many trains are about to leave, our young scholastic travelers have made mistakes; they have entered one train at random when they should have taken another; they have set out for Athens or Rome when their tastes and aptitudes were calling them rather towards a modern city. But little by little people will come to understand more precisely what each section of studies leads to, what is taught in it, the goal aimed at, the profit to be derived. The choices will be made with full knowledge of the facts, and then only will it be possible to appreciate the whole value of a fortunate

reform whose guiding thought has been especially to diversify intellectual nourishment in order to fit it to the faculties and to the different capacities of pupils; just as upon a table one would serve dishes of various kinds to satisfy the needs of stomachs more or less strong or delicate.

What one can ascertain at present is that Greek and Latin studies will fall behind; that was to be expected. But the loss will be more apparent than real. How many pupils have followed up to the present time courses in the classics without profiting by them? In every class there were too many laggards who hindered the march forward of their comrades. Henceforth, this *caput mortuum* will disappear. The chosen few who remain loyal to the old humanities will hereafter comprise only good scholars, earnestly bent on studies which they will have sought out of their own free will, and in which they will be capable of succeeding.

Some figures will show plainly the numerical inferiority of the contingent which still flies the Greco-Latin flag. Let us take a few great lycées of Paris. Janson de Sailly, out of its 150 pupils in the second form, counted during the scholastic year 1902-03 only 23 in section A of the second cycle, the only section representing in its entirety the teaching of the classic humanities; Louis le Grand, out of 108 pupils in the same class, keeps only 25 in section A; Condorcet, 42 out of 169; Henri IV, 11 out of 64, etc. The proportion is nearly the same in the great provincial lycées. The second form at Lyons recruits 88 pupils, of whom 27 only have kept up pure classic training. Bordeaux, with the same number of pupils, has only 20 in the second form who are doing Greek and Latin at the same time; Nancy, 12 out of 65; Lille, 9 out of 42, etc.

It is chiefly Greek that will suffer from the application of the plan of studies of 1902. Latin, this must not be forgotten, remains an obligatory study in section B—Latin and living languages—and in section C, Latin and sciences. But Greek is taught only in section A, and there are already a number of lycées, and especially of colleges, where section A is quite forsaken. Shall we again see the day when it was said: *Græcum est, non legitur?*

Of the four sections inaugurated this year in the class of the *secunda,* the one that immediately most attracted and obtained the favor of the scholastic public is section C—that in which a little Latin and a certain amount of living languages is joined to much physical and mathematical science. We have not yet before us complete statistics. Here, however, are some significant figures: In the thirteen state establishments at Paris, section C has brought together 1417 pupils as against 101 in section A, and 151 in section B. Outside of Paris, in 28 lycées whose situation we exactly know, section C shows 407 pupils as against 196 in section A, and 170 in section B.

Section B, that which associates Latin with the living languages, seems scarcely to have succeeded. In the first place, it is said, the poorest students have registered for that, and, furthermore, it is the one whose effective force is least considerable. Perhaps even the section is not destined to survive, for it satisfies neither those who are looking for purely modern instruction rid absolutely of Latin, nor those who, clinging to tradition, wish to acquire in its entirety the classic education. Anyhow, this section is likely to stay behind the other three sections, especially section D—sciences and living languages—which, in the new plan of studies, represents the purely modern teaching. That section alone will draw as many pupils as the three others. Thither will flow the wave of those who dislike the study of Latin and who think that the study of the sciences and modern languages can suffice for general culture.

The most noteworthy effort which in this year of practical trial and of setting things going, has been attempted in our lycées and colleges, is the effort bearing on the organization of courses in living languages. The French hitherto had been looked upon thruout the world as the people who least learned modern languages. Things might change, if the start given during the past year to the teaching of English and German goes on henceforth. The direct method, that which teaches specially the spoken language and teaches it by practical drill, is applied everywhere. Teachers and pupils no longer speak in class save in German or English. Already the results are making themselves felt, and with a little perseverance we shall

doubtless succeed in ridding ourselves of a fault from which we have suffered too long, the ignorance of living languages.

More and more our secondary teaching is turning toward realities and breaking with purely formal studies. Hitherto, too much heed was paid to making accomplished wits; more thought was given to eloquence of style than to positive knowledge. People have come to understand that modern society demands other qualities, that the utilitarian point of view must not be slighted even in secondary studies.

A significant manifestation of these new tendencies is the plan recently conceived of introducing manual training into the lycées and colleges. Rousseau wished Æmilius to be a joiner. Herbart, on the other hand, recommended gardening, bookbinding, and also carpentry. "Every man," said he, "ought to learn to use his hands; for the hands have their place of honor, along with speech, in raising man above the animals!" Inspired by these ideas, several members of the Higher Council of Public Education have been led to utter the wish that in lycées and colleges there should be organized workshops for manual training, and that the pupils of these establishments should have access to them under stated conditions. Here are the grounds taken by those who expressed the wish, for laying it before the Educational Department: "Inasmuch as bodily skill and keenness of the senses are no slight matters in an education truly complete, and inasmuch as these qualities not only have a highly practical importance in life, and in several professions, even liberal professions, but, whereas, according to many precise psychological observations, they go hand in hand with the growth of the intelligence; and inasmuch as manual training drills the powers of observation, imagination, and invention, of combination and reflection; inasmuch, more particularly, as they familiarize the mind with a number of elementary geometrical, mechanical, or physical laws, and as the intuition thus acquired is a valuable preparation and almost a necessary basis for scientific training, rightly so-called; inasmuch as, independently of these various practical or intellectual advantages, there is a certain moral interest in guarding the young by the practice of manual training against prejudices

still too widely spread which look down upon it for the too exclusive sake of the purely intellectual life; inasmuch, finally, as actual work of this kind may furnish our pupils both wholesome and intelligent diversion which they would be glad to find to vary their recreations: therefore, the undersigned are fain to hope that the administration will study, favor, and urge the organization of manual training in the lycées and colleges. . . ." The Higher Council, stirred by the force of all these intellectual and practical grounds, was of the opinion that the question ought to be looked into; assemblages of professors have been consulted; generally they have approved of the plan, and the year will not pass without something being done.

If, by introducing the workshop into the colleges and the lycées for secondary training, frequented mainly by the sons of the bourgeoisie, they are thinking to make class prejudices disappear, and to put the tools of plain workingmen in the hands of wealthy children in order that they may learn not to despise toil of the hands, they are earnestly thinking also of fighting a vice often laid at the door of our university education, which was commonly said to slight the upbuilding of character. To remedy this strictness has been lessened, the pupils' freedom has been enlarged, the organization of athletic clubs has been favored; and it is no longer in America alone that football is held in honor. Toward the same goal, namely, the building of character, tends one of the happiest innovations in the programs of 1902—the introduction of the teaching of elementary ethics in the grammar classes, the *quarta* and the *tertia*.

This test has succeeded perfectly. Beginning with this year, experience has proven that the pupils took a lively interest in the lessons in ethics; that, notwithstanding their youthfulness, they handled with ease the simple enough moral notions which their teachers inculcated; especially that they felt proud and happy that early appeal was made to their minds to reflect upon the earnest themes of life's conduct, and at having their rising consciences awakened. By familiar talks, by reading, by narrating stories, by appealing to the intuition, that is, to the facts that the child has gathered in his little experience at

school or at home, his attention is directed to human virtues, to those especially which he is called upon to practice at school or at home, and which will have in society room for full expansion. All abstract generalizations, all theoretical discussions which would pass over the child's head, and which are kept for classes of philosophy, are avoided. Yet, because he has now an hour a week to be devoted especially to the teaching of ethics, the teacher of the *quarta* or *tertia* does not forego the old method, which consists in making all his teaching bear upon moral education, upon drawing from the lesson in history, and from the study of literary masterpieces, their whole moral contents. But the opinion is that this general, and, as it were, scattered teaching of ethics cannot be enough. It is good, it is needful that the vague impressions, the floating ideas gathered by the scholar should take shape, and that they should be co-ordinated and condensed in a trim and precise formulary. Will it be said that by beginning ethical teaching too early we risk the blighting of it and that we are likely to lessen the influence which its very novelty assures it in the class in philosophy? This would mean agreement to a queer pedagogic contradiction. This would be to ignore the laws of mental growth and the most unquestionable rules of education. Herbart was quite right in saying, in a very different sense: "A child must not be taught anything that is entirely new to him." Teaching bears fruit and truly arouses interest only when it has been thought out long beforehand—if preliminary intuitions lighten up future conceptions, if elementary ideas serve as a prop for complicated theories. It is never too early to put a child in the school of duty, accustoming him to analyze his feelings, to realize the motives of his actions, to appreciate moral beauty.

Of our three grades of education the one which unquestionably has best succeeded—thanks to the law of 1896—in establishing itself upon solid and enduring foundations is the higher education. The fifteen universities of France are thriving and growing; they are continuing successfully and often brilliantly their professional work, which is to form physicians, jurists, teachers, and also future scientists, or technical specialists, capable of making their work in industrial careers. Yet, not

only are they endeavoring to maintain and to spread the science acquired, but they are striving to extend the new science thru the researches and discoveries of their professors, thru their theoretical labors and their publications; they are helping to enhance the high standing and good name of French science.

The latest statistics show that the number of students in the various faculties tends to increase from year to year. In 1903 the total number of students in law, medicine, and pharmacy was 29,313, to be divided up as follows: Law, 10,580; medicine, 7434; pharmacy, 3138; sciences, 4340; and finally, letters, 3821. It is interesting to note that out of the whole number of 29,313 students in the faculties, there are 1235 women. *Le féminisme* is developing, and the doctresses in law and medicine will soon be legion.

Yet altho we have not yet won all that we could wish for on this head, the number of foreign students, which is so considerable in the German universities, is perceptibly growing in the French universities, wherein it rose 1903, to 200; in law, 497; in medicine, 580; in pharmacy, 21; in sciences, 406; in letters, 474.

This patronage from abroad comes to us mainly from the East—from Russia, Bulgaria, and Egypt. The Americans, to our deep regret, have not yet found out the road to the French universities. We are, nevertheless, making efforts to draw by every means young people from every country in the world. We are not satisfied merely to allow them, on matriculation, to follow the courses and regular drill open to French students. We are furthermore creating for their benefit special kinds of training which permit them to get a diploma. The Grenoble University and that of Lyons, too, have distinguished themselves, in this direction. At Lyons, for instance, there has been organized a series of courses meant exclusively for foreign students. This system comprises a course in the French language, and one in French literature, a course in contemporaneous history, and one in the science of education. These courses take place during the winter semester, from November to April, and students who have followed them may, on examination, obtain a *Certificat d'études françaises.*

Naturally, among our universities, Paris with its 12,574 students—more than a third of the whole number—is still easily first. But the provincial universities immediately following—Lyons, 2629 students; Bordeaux, 2204; Toulouse, 2040, etc.—have, nevertheless, their reason, too, for thinking themselves mighty centers of the higher education. Well-manned—Lyons has more than 100 professors — thoroly supplied with tools for scientific work, these centers of instruction can cope with the best universities in Europe.

They are no longer, as used to be said, mere "examination machines," bachelors of arts factories. The new baccalaureate régime, which adds to the professors in the faculties of sciences and letters a certain number of lycée teachers to take part in the committees on examination, has had the fortunate result of partly relieving the members of the higher system of the thankless job of baccalaureate examinations which took too much of their time. This is so much gained for unhampered personal work, for unselfish research, and, also, for the task of teaching.

Only one dark cloud is hovering at the horizon of the future of the universities. There is reason for fearing lest the new military bill, which will certainly be carried next year, may lessen the number of students in the higher branches. To be sure, this bill shortens military service to two years, but it allows neither exemption nor dispensation to any young Frenchman. Now, hitherto the *licenciés ès lettres et ès sciences* —doctors of medicine and law—enjoyed the privilege of serving only one year. They were let off from the other two years. Certainly this privilege drew to the universities a certain number of students, not so much for the sake of science as for the dispensation which saved them the drudgery of two years more in a regiment. We are liable, therefore, to lose a few students; but the best we shall not lose, and the universities are making up their minds without bitterness to the early enforcement of a law which will take away from them some students—a law of social justice, nevertheless, for it rigorously establishes the equality of all Frenchmen who have to face the obligation of military service.

In all likelihood, what French universities will lack for a

long time to come will be, not students, but benefactors, the generous givers who abound in the United States, and who thru their splendid gifts enrich your universities and enable them unceasingly to widen their field of activity. In France, to be sure, here and there we gather up a few thousand francs, meant to found prizes which are awarded to the best students and to buy apparatus for scientific investigation. But where are the millions of the Rockefellers, the Carnegies, and the rest?

With our slender means we are trying, nevertheless, to do great things, and altho still young—for they go back only to 1896—the French universities are already receiving, even from abroad, encouragement of value. Thus, during the late vacation, the universities of Grenoble and Lyons were visited by the Franco-Scottish Association, a kind of university alliance between Scotland and France. It comprises a Scottish branch presided over by notables of Great Britain, Lord Glenesk, Lord Reay; and a French branch, headed by M. Casimir-Périer, ex-President of the French Republic. Two meetings have already been held, one at Paris and one at Edinburgh. This year the gathering was at Lyons and Grenoble. Many graduates and friends of the universities of Edinburgh, Glasgow, Aberdeen, and St. Andrews came here to fraternize with French university men. In the field of teaching, all peoples are friends and allies. Science has no national boundaries. Nothing could be of greater value to the advance of thought, as well as to the world's peace and to the harmony of nations, than international meetings which bring together, at least for a few days, wherein they may exchange views and common aspirations, men of different race. Such, within its modest limits, was the Franco-Scottish meeting of 1903. Such will be in 1904, on a vaster scale, the congresses of the World's Fair at St. Louis, whither we hope Frenchmen will go in great numbers, and where we hope the consignments of our three grades of education will not cut a bad figure and will bear witness to the progress made in education by republican France.

GABRIEL COMPAYRÉ

RECTEUR DE L'UNIVERSITÉ DE LYON

III

EXERCISES IN THINKING ABOUT NUMBER AND SPACE: TRANSITION TO ALGEBRA AND GEOMETRY (IV)

Concerning Number

Fundamental Operations with (Positive) Integers, or Count-Numbers

(*c*) *Subtraction Viewed as a Counting Process, Inverse of Addition.—Need and Introduction of New Numbers; Negatives or Barred Numbers (IV).*—Am I right in supposing that you know how to use the words *opposite* and *reverse?* An excellent way to show that you *can* use a word properly is to use it properly. Do you agree? Show me, then, by some sentences that you understand the meaning of opposite and reverse. What is the opposite of *in?* What is the reverse of *out?* If one thing is the reverse of another, is the second the reverse of anything? Of what? (The first.) Do reverse things, or opposites, always go in pairs? Name other such pairs. What is the reverse of *on?* Of *off?* There is another word that looks and sounds very much like reverse and often has almost exactly the same meaning. Can you tell me the word? Well, it is *inverse.* That is an important word, and we must learn to use it, a thing soon done. Tell me what the inverse of *going north* is. What is the inverse of *going south?* Of falling asleep? Of getting awake? Inverses, too, seem to go in pairs, you see. Name still other inverse pairs. What is the inverse of *counting onto?* Of *counting off from?* Counting one number *onto* another, what have we named that process? And now what do you think we should call the *inverse* process, I mean counting one number *off from* another? (Subtraction.) Define subtraction. What is subtraction the inverse of? What is, then, the inverse of subtraction? The other day we talked a good deal about the word "related." You may now tell me

how addition and subtraction are related? (Each is the inverse of the other.) Does the class, additions, include the class, subtractions? What class of operations *is* included in the class, additions?

I suppose you think I have been asking very easy questions. So I have, and you have answered very well, too (if that, which ought to be, *is* so). Some questions are not so easy as they seem, and we have to keep our wits about us not to be fooled. Let me ask you some such questions. When I say, count this group of 5 marks onto this group of 8 marks, do you think you are asked to count the *groups?* (No, the numbers of the groups are *given* to you.) What *are* you required to do? (To count, etc.) What count-word, then, are you to use *first?* (Nine.) Why nine? But now suppose you are to count 5 *off from* 8, what count-word would you use first? (Seven.) Count 7 onto 9. Count 7 off from 9. You may try me with some similar exercises, and see if I can always begin with the right word. How else say in words, count 6 onto 9? How else say in words, count 6 off from 9? I say, subtract 20 from 25; you may say it in the other way. Which of these numbers is the *minuend?* The *subtrahend?* And what number is the *remainder?* When one number is to be counted off from another, which is the minuend? The subtrahend? *Define* minuend, subtrahend, remainder. (Secure complete, clean-cut statements.)

Let us now talk more in symbols. How can you say in symbols: count 2 off from 5? ($5-2$.) What does the expression $10-7$, tell us to do? (To count, etc., or to subtract, etc.) How say in symbols: count a things off from b things? ($b-a$.) Name the minuend, etc. What does $a-b$ direct us to do? Here which number is the minuend?

Look at these two equations: $a+b=s$, $a-b=d$. If $a=4$, and $b=2$, what is s? What is d? (Here practice *always* taking a larger than b.) Now bear in mind that our talk is to be strictly confined to count-numbers, and let me ask you some questions about those two equations. And before beginning, I'll warn you that you will fail unless you bring to bear the edge of your mind and keep it sharp, too. If $a=4$ and $b=6$, what is s? Very well, can you tell me what d is? (No.) Why not? Is

there no count-number to tell the answer? (There is not.) Can I tell the answer to the question, 5—8=? (No.) Why not? (Have no number to answer with.) But it *is* a *question,* is it not? Here is another question: What is the result of counting 10 off from 7? Can we answer it with a count-number? Why not? Is the question an addition question? What kind is it? If you know what numbers *a* and *b* stand for, can you always find the number *s* stands for? *Always?* (Yes.) What do you here mean by always? We can, then, answer *all addition* questions? What sort of numbers are we thinking of? What sort of numbers are the answers to addition questions about count-numbers? Can we answer *some* subtraction questions about count-numbers *with* count-numbers? Can we answer *all* such questions with count-numbers? Ask some subtraction questions that can and some that cannot be thus answered. Look at the question: *a*—*b*=*?* It *is* a question, is it not? Put it in non-symbolic (ordinary) language. Is it an addition or a subtraction question? Can we answer the question if *a* is greater than *b*? Illustrate. If *a* is less than *b,* can we answer? What third supposition remains? Can we answer the question, if *a*=5, and *b*=5? (There will probably be some affirmative answers.) Do you really think so? Well, what is the answer? Some of you say "nothing"; others of you, "zero." But "nothing"—is that a *number?* (It certainly is not.) *Zero is* a number, but is it a *count*-number? Call off the count-numbers, beginning with the smallest. Very well, is zero in that series? (No.) What, then, are we compelled to say, can we with our count-numbers answer such questions as what number tells the difference between 5 and 5? You can tell me now, I think, exactly how *a* and *b* must be related, if we are to answer such subtraction questions as, *a*—*b*=what number. Now, John, write the series of count-numbers on the board. (1, 2, 3, . . .) What do those dots mean? (That the series has no end, *i. e.,* is *infinite.*) We call dots so used *continuation marks.* Can we *add* any number we please of that series to any other number we please of the series and tell the sum with a number of the series? (We can.) That is rather a long question. I will ask John to restate it precisely. William may ask the *inverse*

(or subtraction) question. (Merely replace *add, to,* and *sum* by *subtract, from,* and *difference.*) What is the answer? We find ourselves here confronted by a certain definite difficulty. What is it? Another way to state the difficulty is this: *We have certain subtraction questions to ask about count-numbers which these numbers cannot answer.* You know something of fractions. Will these numbers remove the difficulty? (No.) Explain.

What, then, are we to do? We have to choose between two things. Can you guess what they are? One thing is, *stop asking the question that our numbers can't answer.* Give me again, one of these questions. Well, if we are not willing to put all such questions by as *unanswerable,* then, if we are not going to be quite foolish, I think we must make some *new* numbers to answer our questions with. Did I say *make* or find new numbers? Well, that is what I meant. Maybe you think we can't *make* numbers. If I try, will you help? Let us see just what kind of numbers we need. Here is a question: 5—6=what number? We are to make a kind of numbers that will answer *all such* questions. Do you agree that such is our task? See, then, that you watch very sharply and let nothing escape. Look at this straight line, just a line without any of its points marked.

I will ask William to mark with the letter *O* any point of the line he pleases. You may now lay this ruler on the line so that one end shall be at *O* and the other at the right of *O*. Mark the second point *A*. How long is the ruler? (1 foot.) You have a piece of line between the points *O* and *A,* this piece has a *beginning* and an *end.* Every such piece is named *line-segment.* How long is this particular segment? Mark the point *A* with 1. If the segment were some other length, say an inch or a yard, you might still mark the point *A* with 1, but then 1 would mean—what? What *number* tells how far it is from *O* to *A?* (1.) Where, then, is the point 2? The point 3? 4? 10? Now John may go to the board and *plot*

the points 9, 7, 13. Is there a number so large that you cannot find a point for it? Can't you imagine the line to go on and on? And if your imagination grows weary, can you not *suppose* the line to stretch still on and on, without end? Is there no end to the number series? And none to the line? Then I think we can suppose *all* the numbers plotted on the line? Not only that, but in so doing, we use *none* of the points on the *left* of *O*. Do you agree? Tell me exactly what we have agreed upon?

Now when you *add* 2 to 5, the sum 7 is on which *side* of 5? When you subtract 2 from 5, the difference 3 is on which *side* of 5? Does *addition* always carry you *rightward?* And *subtraction* always—which way? Notice that we are speaking of *count*-numbers. To add 5 carries you how many steps? To subtract 5 carries you how many steps? What is the *inverse* of rightward? Of leftward? Now be very careful. When you add 3 to 2, where do you start on the line? (At 2.) If you were adding to some other number, say 5, where would you start? Now add 3 to 2. Where start? Go which way? How many steps? Then to *subtract* 3 from 2, where start? Go in which direction? How many steps? (Three.) John may *take the steps with the ruler.* Mark the point you have reached, with a *dot.* How far from *O* to this dot? (1 foot.) But we have already used 1 to mark a point on the *right.* This dot is on the left. For this dot, then, we *need* a *new* number. Let us mark the dot $\bar{1}$, putting the *bar* over it so we shall know it from 1. Now what number tells us the result of subtracting 3 from 2? ($\bar{1}$, barred one.) 8 from 9? Where do you think $\bar{2}$ should be? Plot $\bar{3}$, $\bar{10}$, $\bar{6}$. Ask a subtraction question that $\bar{2}$ will answer. $\bar{5}$, $\bar{3}$, $\bar{9}$. (Practice.) These new numbers—have we *made* them or *found* them. If you prefer to say "found," the word, I think, will do pretty well. How do you think it would do to say we *invented* them? Whatever word we use to tell how we came by them, we all agree that we *have* them. How many of them? How many do we need? Ask two questions each of which requires $\bar{50}$ to answer it. Does a farmer need these new numbers in counting his sheep? Now tell me again *why* we made or invented these numbers? If *a*

is a count-number, where is its point? Where is the point for $\bar{a}$? Is one of these two points farther from O than the other? (No.) How is 1 related to $\bar{1}$? (Equal and opposite, or inverse.) How is a related to $\bar{a}$? If we had placed 1 to the left of O, where then should we have placed $\bar{1}$? I hope you do not think we were forced to choose the right-hand side for the count-numbers; for, while this choice is common and convenient, it is plainly not necessary. To be sure, if we should make the opposite choice, it would then be necessary to change our talk to correspond. How? But let us stick to our first choice. You can now answer these questions: $6—8=?$ $6—10=?$ (Practice.) Look at the equation: $a—b=d$. What is d, when $a=4$, and $b=10$? (Practice.) What point of our line do you say should be marked zero, 0? (The point O.) Why? Zero, too, is a number, but neither a barred nor a count-number. It is another sort of new number. What kind of question does *it* answer? Which of the numbers we now have will answer such questions as, what is the distance of a point from itself? Can we now answer *every subtraction* question about count-numbers? (We can.)

Some days ago, when we talked of addition, we noticed certain laws of addition. What are they? (Here a little review.) I wonder if subtraction, too, is *commutative*. Try it, is the statement, $5—4=4—5$, true? Is the *order* of minuend and subtrahend indifferent? (No.) Is there a commutative law of subtraction? (No.) Is the statement, $a—b=b—a$, true? What of this statement, $(a—b)+c=a—(b+c)$? Try it with $a=8$, $b=4$, $c=6$. The left member is 10, the right member is what? (2.) Is there an associative law of subtraction? (No.) You may now show me clearly that subtraction is neither associative nor commutative. (Dwell.)

C. J. KEYSER

COLUMBIA UNIVERSITY

(*To be continued*)

IV

THE COLLEGE CONFERENCE OF THE MIDDLE WEST

Under this title, I desire to speak of the causes, beginnings, and growth of an organization that is, in its section, a pioneer in the endeavor to control and direct college athletics. It is not a pioneer as regards some of the interests involved, but in its purpose to bring into harmonious relations the athletic interests of educational institutions situated in different States, it is clearly entitled to that distinction. Organizations designed to promote and regulate athletic interests within State lines existed for several years before the formation of the College Conference. Of necessity their regulations were crude.

As indicating the status of the amateur in one such organization, it is of interest to note that in its rules, it was provided that instructors were eligible in intercollegiate contests, and that two professionals might be included in each team. That fine flower of college life, a knowledge of and love for amateur sport, had not yet bloomed in many a western college and university. In fact in some few localities, even in this year 1903, the sentiment yet prevails in administrative circles that if a man is a bona fide student, amateur standing is a mere aristocratic furbelow. Within a year, at a large and important meeting of educators, I have heard this sentiment expressed. It would, however, be incorrect for anyone to therefore infer that such ideas are representative of opinion in the Middle West; they are the echoes of a day that is dead, and the citation is only made for the purpose of showing what has been common. But, in 1885, the situation was different; the amateur had to make his way. In 1890 the situation was different; he still had victories to win that he might be supreme in college sport. Baseball flourished at an early date, for it was inexpensive, attractive to many as players and in favor with the body of college students, and it was the college game to test the athletic

supremacy of rival institutions while football was developing in the East. About 1890, it may be said, this new aspirant for college athletic honors became a prime favorite with our western college world. The West must not be behind in any good thing. It was a good thing so, "push it along," said the college boys, and they made matters all the merrier and introduced a game that made rivalry far greater than had been possible with baseball alone. A very distinguished statesman once said that "the way to resume specie payments was to resume," and so the way to play football, according to the college boys' standard, was to play football, that is, *good* football, and as they were precluded by their resolution from waiting years to find out how to play and since western spirit was also involved, what more natural than that they should call on Harvard, Yale, Princeton, and Pennsylvania to teach them the game? To an observer, interested in the situation and in high standards among college athletes, such a cry from Macedonia had in it a certain prophecy of better things, for the high ethical standards at these institutions had long been acknowledged, and so the observer reasonably expected that, while the coaches were anxious to win, still they would be preachers of athletic righteousness and would distinctly discourage all departures from a strictly amateur standard. A general survery of the small army of coaches that have invaded—for a generous consideration—our Mississippi Valley does not reveal that in the main they have been very actively aggressive factors in the evolution of the western amateur. Perhaps, however, they have done more than appears, but so far as there is evidence, they seem to have considered that they were here to teach football and let others look to the rest.

Football had come and with it an intensified desire to win. "What are the prospects in football?" was the common question. If good material was not at hand, it was sought. The big man, the fast man, the man with "football sense," he was the fellow that was wanted. The statesman from Texas said, "What are we here for except the offices?" and it looked as if the managers had adapted it so that it ran, "What are we here for except to win?" Things became strenuous; then

pretty soon they became more strenuous. The pity of it was that there was not enough of ethical sentiment or such organization of athletic interests as to free the situation from suspicion, or to cause the charges and counter-charges of unfair tactics to fall flat. The college papers were busy with stories of this or that man who was on the eleven of some rival institutions. Then the city press, for want of something better to do, took up the matter, and the result was a mass of distrust and ill feeling that was the very opposite of that generous, open-handed rivalry that should characterize college men. The files of the Chicago press during the last decade are in evidence, bearing on this point. Perhaps this was the shortest way out, for it is now admitted that there was much truth in many of the charges. Why this condition was permitted in institutions managed by conservative men may be better understood if we point out two facts. First, at the period in question, college administration had paid little or no attention to athletic interests; they had never been regarded as a necessary part of college life; they had been endured, but not loved, for the powers in control had never played baseball or football, and, as to tradition, it was not the thing for college presidents to be athletically inclined, and individually many did not have the spirit to sympathize with the new order. The boys were given some old corner of the campus and there by hook or crook a board fence and a few bleachers were provided, and the college management prided itself on its generosity in allowing the use of the ground, but doubted its wisdom, and it never occurred to this same management that, having eyes it saw not, neither did it understand what possibilities for education, college loyalty, and better things that college athletic field contained. The second fact was the unparalleled development of the institutions chiefly concerned, in educational and material resources. It is not too much to say that excepting the marvelous development of our high-school system, nothing educational, East or West, can compare with the expansion of the collegiate institutions of the Central West during the last decade, particularly the State universities. In the hurry of this expansion something was bound to suffer, and it was the athletic interest, as a matter of

course. But the athletic man was abroad in the land, and a new gospel was preached from primary school to college. The old pagan Greek and Roman world began to see its ideal of physical strength appear in Christian civilization. This had its influence, but most potent was the revolt of many college men, both in the student body and in the faculty, against existing conditions. These conditions in the last analysis resolve themselves into lack of education—the mass of students needed to know the meaning of amateur and the qualities going with it; the presidents and boards of trustees needed to know more of the new spirit, to sympathize with it and devise means to encourage while directing and controlling it.

But some of the presidents were alive to the situation and had long been seeking for some solution, and now that the time seemed ripe for action, a call for a conference was issued by President Smart of Purdue University, Lafayette, Ind. It met at Chicago on January 11, 1895. To this conference came President Angell of Michigan, President Draper of Illinois, President Harper of Chicago, President Northrup of Minnesota, President Rogers of Northwestern, President Smart of Purdue, and President Adams of Wisconsin. After a careful discussion, the conference proposed a body of rules for the consideration of the various faculties represented and which, if adopted, should form the athletic code of the faculties so voting. In current discussion, they were frequently referred to as the presidents' rules, and as they are of importance in themselves, and also because the conference marked an epoch in the athletic situation, they are here given (italics my own):

THE PRESIDENTS' RULES

1. Each college and university which has not already done so shall appoint *a committee on college athletics* which shall take general supervision of all athletic matters in the respective college or university, and which shall have all responsibility of enforcing the college or university rules regarding athletics and all intercollegiate sports.

2. No one shall participate in any game or athletic sport unless he be a bona fide student doing full work in a regular or special course as defined in the curriculum of his college; and no person who has participated in any match game as a member of any college team shall be permitted to participate in any game as a member of another college team, until *he has*

been a matriculate in said college under the above conditions for a period of six months. This rule shall not apply to students who, having graduated at one college, shall enter another college for professional or graduate study.

3. No person shall be admitted to any intercollegiate contest who receives any gift, remuneration, or pay for his services on the college team.

4. Any student of any institution who shall be pursuing a regularly prescribed resident *graduate course within* such institution, whether for an advanced degree or in one of its professional schools, *may be permitted to play for the period of the minimum number of years required for securing the graduate or professional degree for which he is a candidate.*

5. No person who has been employed in training a college team for intercollegiate contests shall be allowed to participate in any intercollegiate contest as a member of any team which he has trained, and no professional athlete or person who has ever been a member of a professional team shall play at any intercollegiate contest.

6. No student shall play in any game under an assumed name.

7. No student shall be permitted to participate in any intercollegiate contest who is found by the faculty to be *delinquent in his studies.*

8. All games shall be played on grounds either owned by or under the immediate control of one or both of the colleges participating in the contest, and all games shall be played under student management and not under the patronage or control of any other corporation, association or private individual.

9. The election of managers and captains of teams in each college shall be subject to its committee on athletics.

10. College teams shall not engage in games with professional teams nor with those representing so-called athletic clubs.

11. Before every intercollegiate contest a list of men proposing to play shall be presented by each team or teams to the other or others, certifying that all the members are entitled to play under conditions of the rules adopted, such certificate to be signed by the registrar or the secretary of the college or university. It shall be the duty of the captain to enforce this rule.

12. We call upon the expert managers of football teams to so revise the rules as to reduce the liability to injury to a minimum.

These rules were adopted with only one dissenting vote, that of President Draper of Illinois, and he so voted, as he shortly afterward publicly stated, because he considered the rules too lax to accomplish the results desired. The amendments that were subsequently made by the Conference seem to have abundantly justified his position.

An examination of this body of rules is instructive as showing the position that western college presidents were willing to

assume in 1895. Did these rules express their view as to the eternal fitness of things athletic, or did they indicate what the presidents considered the athletic ideals of their respective institutions? Did they think that a half loaf was better than none, or did they think that they were handing out a full loaf, full weight, as pabulum for the athletic man? These questions are pertinent, for it will be observed that two matters of paramount importance for the college amateur were practically ignored: namely, amateur standing and the time limit. As to the latter, there is, to be sure, a reference in rule 4, as to graduate students, and by its generous provisions, if there were a sufficient number of graduate degrees, the star athlete might be playing yet and be in good and regular standing. By the first clause of rule 2, a student might play year after year as an undergraduate, if the faculty would permit it. He could attend during the particular season in which he was interested and then take a much-needed rest and return next season, greatly refreshed for his arduous duties; he could work this scheme for one branch of sport and then for another; his opportunities were great. As to amateur standing, no provision was made except to secure it while a student was actually a member of a college team (rule 3), if we except the reference to a man who has been a member of a professional team (rule 5). This reference, in the sense in which it was intended, had very slight application in college sport. The term professional athlete (rule 5), was intended to cover the case of the man who had made athletics his business for a considerable period of time. It did not refer to those cases where amateur standing is commonly lost. We can only wonder at such a standard among gentlemen who had set themselves to the task of clearing the athletic atmosphere, and as for adequate explanation of the position assumed in these particulars, it does not seem possible to give any that is in keeping with the dignity of "the high contracting parties."

There were, however, some very important matters accomplished by the conference. First and in general, the moral effect of the meeting cannot be overestimated, revealing, as it did, the realization that there were evils to be remedied and the

purpose to endeavor to improve the situation. Second and in particular, the recommendation of rule 1 marked an epoch in the attitude of the presidents toward athletic interests and pointed out the way for rational reform; the athletic tramp was remembered (rule 2); the vital question of scholarship was considered (rule 7): the importance of college control of intercollegiate contests was touched upon (rule 8), and other matters of importance received attention.

The outcome of the discussions of the presidents' rules in the various faculties was the first College Conference. The initiative was taken by Professor McMillan of the University of Minnesota. It met at Chicago, February 8, 1896. The same seven institutions were represented as at the meeting of the presidents. After diplomatically saying that they indorsed fully the spirit of the presidents' rules, the Conference went at them with a fine-toothed comb. Most of the changes in wording, however, were slight with the exception of rule 5 which was now numbered 4, by dropping rule 1, since it was in its nature a recommendation only; rule 12 was also dropped. As finally adopted, the fathers of the original rule could not recognize their child. It read thus:

4. No student shall participate in any intercollegiate contest who has ever used or is using his knowledge of athletics or his athletic skill for gain. This rule shall be operative after October 1, 1896. No person who receives any compensation from the University for services rendered by way of regular instruction, shall be allowed to play on any team. This rule shall take effect December 1, 1896.

In adopting rule 4, the Conference did a notable work. Could it but have added a reasonable time limit, it would have been yet more notable. That was reserved for the next Conference. However, as it was, there was "glory enough to go around." Two new rules were added:

11. Athletic committees shall require each candidate for a team to represent the university in intercollegiate contests, to subscribe to a statement that he is eligible under the letter and spirit of the rules adopted.

12. No student shall participate in any intercollegiate contest after any year, who has not been in residence at least six months of the preceding year of the course.

Rule 11 was evidently taken from Harvard's regulation, and

rule 12 was an endeavor to prevent the scandal of men coming to college, leaving at the close of the athletic season in which they were interested, and then returning in succeeding seasons. The Conference also did a valuable work when it suggested certain rules for the guidance of athletic committees. Two are so important that they are here given: "It is agreed that all athletic association accounts shall be audited by committees of the respective universities upon which is a member of the faculty's athletic committee." This is a valuable safeguard. The second is rather a declaration than a rule.

It is further agreed that the athletic committees of the institutions here represented will do all in their power, both officially and personally, to keep intercollegiate athletic contests within their proper bounds, making them the incidental and not the principal features of university and intercollegiate life. All that is dishonorable, unsportsmanlike, ungentlemanly, or unnecessarily rough in any branch of athletics is particularly and expressly condemned.

These modified rules were transmitted to the institutions represented for their consideration. Minnesota, Purdue, Wisconsin, and Illinois adopted the rules as formulated. The last named had in fact adopted the presidents' rules within a week after they were received, but at the same time by faculty resolutions pointed out manifest deficiencies. Michigan, Chicago, and Northwestern adopted the rules with certain amendments.

Representatives from the faculties of the same institutions again met at Chicago on November 27, 1896. The rules were again carefully considered, and the Conference placed its mark of censure on the idea that the time element was of little importance. To one conversant with college athletics, nothing can be plainer than that a reasonable limit in this regard is of the utmost importance in conserving the interests of the whole body of college students, and so the Conference formulated the following rule:

No student shall play upon the teams of any college or colleges for more than four years in the aggregate unless he shall have secured a degree, in which case he may play two additional years, provided he be a candidate for a second degree.

This rule was amended in 1897, so that only four years of playing are possible under any circumstances. It should also

be noted that the athletic tramp was the subject of legislation, and he was effectually shut out by adopting the rule requiring a year's residence. Thus, in a little less than two years, the conspicuous deficiencies of the presidents' rules had been remedied, and speaking in a general way, the rules as they were formulated at this time are those under which the so-called "big nine" are now conducting their athletic interests.

At this point reference should be made to the meeting of the presidents of the State universities of the North Central States held at Madison, Wis., January 6 and 7, 1897. Eleven presidents were in attendance. College athletics were carefully considered, and as an aid to the administration of these interests, it was recommended that boards of control be formed wherever such action had not been taken. As the composition of these bodies may be unfamiliar to some, it may be briefly stated that, as organized in the West, there are usually three, sometimes five, faculty members appointed by the president, three to five student members elected by some student organization, and sometimes alumni representation also elected by the students. They have proved very efficient.

Beginning with 1896, the Conference has met annually in Chicago on the Friday following Thanksgiving. It will be unnecessary to describe the meetings in detail, but only to refer to legislation of importance. In 1899, the Universities of Indiana and Iowa were admitted to membership. The present composition of the Conference, then, alphabetically arranged, is as follows: Chicago, Illinois, Indiana, Iowa, Michigan, Minnesota, Northwestern, Purdue, and Wisconsin, and it is frequently referred to as "the big nine." In 1901, the Conference inaugurated a track and field meet, which from the very first was a great success. It is yearly increasing in importance and is the culmination of the year's interest in these sports in the Central West.

Two additional functions assumed by the Conference are important. It occasionally happened that doubts arose as to the interpretation of the terms "college" and "four years." To insure uniformity of action, the Conference appointed an arbitrator whose duty it is to pass upon such cases as involve

an interpretation of these terms. Professor Clarence A. Waldo of Purdue University was appointed to this position and has filled it with distinguished fidelity and success. As an indication of the influence of the Conference as well as a personal tribute, it should be stated that his opinion is frequently sought in an unofficial way by non-conference colleges. Another function assumed by the Conference was to constitute itself a board of appeals, to which may be referred at any annual meeting the case of any student who has lost his amateur standing "thru ignorance or pardonable cause."

The rules of the Conference at present in force are as follows:

1. No one shall participate in any intercollegiate sport unless he be a bona fide student doing full work in a regular or special course as defined in the curriculum of his college, and no person who has participated as a college student in any intercollegiate game as a member of any college team, and who has not afterward obtained a college academic degree, shall be permitted to participate in any game as a member of any other college team until he has become a matriculate in such college under the above conditions for a period of one year, and until after the close of the succeeding season devoted to the sport in which he last participated; and in the institutions represented in this conference, preparatory students shall not be eligible to membership on the college teams.

2. No person shall be admitted to any intercollegiate contest who receives any gift, remuneration, or pay for his services on the college team.

3. No student shall participate in baseball, football, and track athletics upon the teams of any college or colleges for more than four years in the aggregate, and any member of a college team who plays during any part of an intercollegiate football (or baseball) game, does thereby participate in that sport for the year.

4. No student shall participate in any intercollegiate contest who has ever used or is using his knowledge of athletics or his athletic skill for gain, or who has taken part in any athletic contest in which a money prize is offered, regardless of the disposition to be made of the same. No person who receives any compensation from the University for services rendered by way of regular instruction shall be allowed to play on any team.

5. No student shall play in any game under an assumed name.

6. No student shall be permitted to participate in any intercollegiate contest who is found by the faculty to be delinquent in his studies.

7. All intercollegiate games shall be played on grounds either owned by or under immediate control of one or both of the colleges participating in the contest, and all intercollegiate games shall be played under student or college management, and not under the control of any corporation or association or private individual.

8. The election of managers and captains of teams in each college shall be subject to the approval of its committee on athletics.

9. College football teams shall play only with teams representing educational institutions.

10. Before every intercollegiate contest the respective chairmen of the athletic committees of the institutions concerned shall submit to each other a certified list of players eligible under the rules adopted, to participate in said contest. It shall be the duties of the captains of the respective teams to exclude all players from the contest except those certified.

11. Athletic committees shall require each candidate for a team to represent the university in intercollegiate contests, to subscribe to a statement that he is eligible under the letter and spirit of the rules adopted.

12. No person having been a member of any college athletic team during any year, and having been in attendance less than one college half-year, shall be permitted to play in any intercollegiate contest thereafter until he shall have been in attendance six consecutive calendar months.

The influence of the Conference has reached in two directions. First, among its members, it has eliminated the distrust that was common before its formation and substituted a generous confidence in the motives and actions of the separate institutions; this in itself is a great achievement. It has elevated athletic standards and gone far toward relegating the professional athlete to obscurity; it has placed or assisted to place the handling of athletic interests in carefully organized boards of control; it has built up a track-and-field meet that already has a wide reputation; it has placed the proper emphasis on intercollegiate athletics in strenuously insisting that courtesy, manliness, and fair play should always be kept prominently in view. These are the more obvious results. Outside of its own membership, it has been instrumental in elevating athletic standards. Its rules have been adopted almost without change by the Ohio State Association and by the newly formed State Association of Illinois, while, among the high schools, it is a constant conserving force for cleanness and decency. It may be fairly claimed that it has abundantly justified its existence and that it is one of the most potent forces in American college life to-day for steadying, directing, and aiding the administration of college athletics.

HERBERT J. BARTON

THE UNIVERSITY OF ILLINOIS,
CHAMPAIGN, ILL.

V

RELIGION IN GENERAL EDUCATION [1]

We are here to-day because the world will not stand still. Each age has its new thought, its new ideas, and its new duties. Each generation must shape its problems afresh. There is an educational ideal that belongs peculiarly to each age. There is no "new education" any more than there is a new poetry or a new music. Still, it is true of education as of poetry and music, that along with the changing modes of life and thought it takes on different coloring. It has been the purpose of education always to interpret the best life of the world anew to each generation; to bring each child into possession of the truest heart wisdom of the race; to beautify and enrich society thru perfecting its individual units.

This has been a difficult task, especially in matters of religion. It has usually been under compulsion that religion has been forced to accept and utilize newer conceptions of astronomy, physics, biography, and history. It is safe to assert that a change in this respect has come about. Religious people are at last learning to look for the revelations of ever-widening truth as their chief business in life, rather than to guard and cherish some formula or custom. We appreciate as never before that, as our views of the world change and our ideas take on new shades of emphasis, religious education must re-form its methods and subject-matter.

I wish to mention three growing world-conceptions which have been gaining momentum in recent years, and are taking possession of human life; and which must be incorporated into our methods and ideals of religious education, as they have already been recognized rather extensively in secular education. They are these: the developmental conception of world-proc-

[1] A paper read before the meeting for organization of the Religious Education Association at Chicago, February 10, 1903.

esses, the growth of individualism, and the recognition of society as an organism.

I. The growth conception. The universe seems to be in a process of becoming, of self-revelation. It flows. It is dynamic and not static. It seems to be moving on in obedience to a purpose, no one fully knows what. For a long time this truth has been accepted piecemeal. Men have readily believed that it was by this process of unfolding, of development, of evolution, that the worlds were made; that the continents and seas, mountains and valleys were formed; that languages, governments, and institutions have taken shape. But while affirming the great truth, we have been inclined to make reservations; governments were given by God for the control of man; man was created at a specific time and out of hand; the Bible was a definite "revelation" to man and ready formed. But these idols have been shattered one by one. The facts of embryology, comparative anatomy, geology, biblical history, and criticism have conspired to compel mankind to stand face to face with the naked truth that growth is the method of life; that the Divine Life as the reality of the universe is in a process of eternal change, transition, and self-revelation.

What, now, are some of the implications for religious education of the acceptance of the developmental point of view? A few of the central ones may be noted by way of illustration.

1. Religions grow. Religion is a part of life. It is not something tacked on, something which has come *ab extra*. It springs up within and out of life itself. We shall never be workers together with God in the largest way and truest sense as long as we keep the false distinction between the world of nature and the world of grace.

2. Religious education is a part of education in its largest sense. The Sunday school is already happily borrowing from "secular" education, not only teachers, but methods and curriculum, in so far as they apply. The feeling of the unity of life must lead us to feel the weakness of the distinction between secular and religious education. The end of all education must center in the deepest and highest products of development—the spiritual life.

3. The Bible is a product of world-development and a record of race-history. Its value is in leading people to feel the movement of spirit—the ebb and flow, the strife, pain, and victory—of a devout people, and to awaken in those of the present time the same stirring of soul and struggle and victory as are there set forth in bold perspective.

4. The end of Sunday-school and other religious instruction is growth—growth of individuals and society. We have many substituted and less worthy ends in religious education. In the Sunday school, for example, we want large classes, or we desire to make the Sunday school the feeder of the church, or we set before ourselves the purpose of trying to teach as much as possible of the Bible. If we would keep in mind that the end we have in view is the spiritual development of our children these would fall away as mere rags and husks. We would look into the lives and hearts of our children, and inevitably be drawn to them with a sympathetic devotion which would make us wiser in ways and means of helping them than we are.

Our question would always be: Taking this child as it is to-day, what can I best do to call out its life to respond to the true and good and beautiful? The object of the mother is not to get as much bread and meat as possible down the child, but to give it that by which it can grow. Teach the Bible, to be sure, and such particular parts of it as will fit the child's needs; but use it as a means and not as an end. Teach *whatever* is the best food now for the pupil's good. In early years it may be fairy stories with the morals left in, skillfully selected, to be sure, as Felix Adler in his *Moral instruction of children* has wisely shown the way, in order to impress the thing to be taught. In youth the end may be reached by the stirring poems of Matthew Arnold and Browning, or essays of Emerson and Carlyle, or novels of George Eliot, as well as by the literature of the Bible.

5. We shall be led to respect the needs of children as distinct from those of adults. The curriculum of religious instruction has been devised by adults who have forgotten how it seems to be a child. The almost uniform methods and subject-matter for all ages of pupils testify to the fact. Ultimately there

should be a curriculum for the Sunday school, as skillfully graded as for the day school. At any cost, the needs of children should be respected. Childhood is the arena in which the problems of race-development are to be fought out. With the help of John Fiske, we are coming to see as never before the meaning of the Master when he took a child and said: "Of such is the kingdom of heaven." The child comes freighted with the result of millenniums of race-experience. It is the essence of world-wisdom in germ, the God-life incarnate. It is our work as teachers, by all the skill we have, to bring into realization its latent possibilities.

II. Another conception which has been gaining ground and more and more influencing our ideals is the recognition of the worth of the individual. The time was, a few centuries ago, when the machinery of the social and institutional order had swallowed up the individual. Persons existed for kings and armies and the church. Education existed chiefly to fit men for the church and to prepare them for heaven. We still have remains of that conception in the songs, sermons, and customs which depreciate in the extreme the worth of this life—"a vale of tears"—and of the individual—"a worm of the dust." The old scheme was a mill in which to grind people thru such a mold that they would fit the church or state or heaven.

Gradually men have fought their way to such a degree of emancipation as to come into possession of their own souls. The record of the struggle has given us the Reformation, at first an imperfect victory; for, as Davidson says, "Protestantism, after its first enthusiasm of negation was over, more and more belied its first principles and bowed down before authority." This movement gave us the enlightenment, the philosophies of Descartes, Locke, Kant, and Hegel. In an exaggerated form it broke out in the French Revolution and thru Rousseau. It is recorded in the establishment of democracies and republics. It speaks thru the Declaration of Independence, strikes, and labor unions, and in the ethics of freedom and individualism and hedonism. The record of this movement has been expressed in the educational theories of those who have

stood as the great exponents of education—Comenius, Pestalozzi, Herbart, Rosmini, Horace Mann, and especially in Fröbel. The recognition of individuals and individual needs has been, in fact, the dominant note in the message of the great educators. It is a chord to which "secular" education is more or less vitally responding. It represents one of the great needs in religious education.

What are its implications in respect to the problem of religious education? It furnishes a new motive for religious work. The end is not far off in some remote sphere or other world. It is here and now—to do what we can to help and inspire and beautify these individual lives in which the seeds of truth may germinate and grow. Our work is like that of the gardener—to tend, and cultivate, and watch; if it is a rose, to try to produce the most beautiful rose; if it is a lily, then make it a perfect lily.

It is thru the enrichment that comes from different tastes and insights that our common grasp of truth and hold on life increase. Differentiation and variation are inseparably bound up with the growth-process. No two things are alike. Each individual is God's understudy, and he never repeats himself. When we catch the full significance of it, we shall break away from much of the uniformity that now hampers us. We expect people to profess the same beliefs, enjoy the same kind of services, study the same lessons and in the same way. We shall drop much of the prescribed work and perhaps follow *topics* instead of set lessons, many days or even months, if they represent the lines along which the persons we are instructing are growing normally. We shall, many times, be learners along with our pupils.

Not long since, in addressing some ministers on the treatment of doubt in young people, I made a plea for approaching them with sympathy, since doubt for this or that person may represent a necessary and normal step in his development. In the discussion following, an elderly man, a successful and revered teacher in a theological seminary, said: "I have learned when a young man is in doubt to approach him, not only with sympathy, but with a great deal of reverence,

because I have found that the great things of life are working themselves out there." The end of education and of life is to realize to the fullest extent the divine life as it is coming to light in individual souls.

III. Now that individualism is becoming a realized fact, now that each person can stand apart from and above the thraldom of society and the trammels of a material existence, what have we? Often a swaggering conceit, social irresponsibility, anarchism, social and political; exaggerated individualism in ethics and religion. But these are the price we have had to pay for a great conquest.

At the same time there has been growing side by side with individualism, perhaps a little in its wake, a fuller recognition of society as an organism. The development of the one is the condition of the other. A society exists only thru its units. A social conscience can never arise apart from a sense of individual responsibility. One might easily trace the records in history and in contemporary life of the growing sense of "solidarity." The present Convention is a sufficient index of the importance we feel of finding our life thru each other, of uniting our interests, out of our common thought to start an impulse whose force shall be felt thruout our national life. "No man liveth to himself, and no man dieth to himself."

Thru the appreciation of society as an organism there is opening up before us a perfected life which shall reflect in its interrelations and organized forms a grander future than before had seemed possible—larger, as the whole is larger than its parts; more beautiful, as a harmony is more beautiful than a single note; more stimulating, inasmuch as thru it the lines for individual expression open in every direction; more inspiring, since each person feels the pulsing life of every other.

This conception must, likewise, bear fruit in religious education. Here, again, we shall find a new impulse for our work. The work of education is social and not selfish. Instead of whining about our eternal salvation and begging for blessings, we are apt to be up and active. Then our happiness and our salvation will take care of themselves. Our chief business today is to live beautifully and helpfully in this present world,

trusting God for the future; to labor for a perfected personal and social life, believing that human genius and human conscience, in whatever sphere we find ourselves, working together with Him, can meet and master the problems of human destiny.

We shall change in some respects our preparation for religious work. We may be led to study more sociology and less theology, more psychology and less homiletics, and more ethics even if it sacrifices some Hebrew and Greek. We may hear more of social righteousness and less of personal salvation from our pulpits. We shall develop, conserve, and utilize more the social instincts in young people, rather than to disparage and condemn them as making against religion. We shall make religious organizations reflect the community life, and become centers for the stimulation of a higher kind of social responsibility.

The business of religious education is to feel the currents of life that are moving about us and to translate them into religion; to appreciate some of the vital forces in religion and to translate them into life. These three facts—the world and life as dynamic, the worth of the individual, and society as an organism—have developed into great world-conceptions. It will be well if they are incorporated into our methods and ideals of religious education.

EDWIN STARBUCK

STANFORD UNIVERSITY

VI

THE AMERICAN COLLEGE COURSE

BY A GRADUATE OF DARTMOUTH COLLEGE

The question now at issue among educators as to the advisability of reducing the time-honored four years of the college course to three seems one not destined to early settlement. Any individual's attitude in the matter is too dependent upon his point of view. Find a man's idea as to what is the object of college education, and you can quite accurately surmise his opinion as to the proper period which that education should comprehend.

If its prime object is that of assuring a young man such mastery of a few subjects as shall enable him with reasonable certainty to gain a satisfactory livelihood, fewer years than those now called for might well suffice. Latin and Greek might go with equal precipitation to the wall. Literature might be dumped into the limbo of useless things, philosophy relegated to the attic. In their place, and in the place of many other things, might be presented the ways of men in various ages, the problems of finance, ready methods of making money, and this with such care and skill that a liberal proportion of the absorbers of the curriculum might rejoice in the assurance that diligent endeavor would result in their one day finding their portraits photographically reproduced in the Captains of Industry column of the strenuous weekly.

Or, if the professional field is to be entered, the rigorous exclusion of all studies not bearing directly upon the chosen work might, no doubt, enable one in three years' time to gain knowledge sufficient for the subsequent successful upbuilding of a professional specialty. Indeed, it has been asserted that an infant predestined by his parents for a medical career should be given a knuckle bone to teethe on, should learn the divisions of the body instead of the

catechism or the multiplication table, and should be early instructed in the proper dissection of his pet puppy. Elementary things thus seasonably out of the way, college might mean to him approximately what the medical school does to-day, and the medical school itself a boundless opportunity for minutest specialization.

That some such view of the object of college education is held by the average youth who seeks the traditional entrance to the halls of learning seems fairly evident. In this highly practical, time-saving, labor-saving age, when present investment must yield certain future profit, why should college enrollments be so constantly on the increase; why should young men be so eager to put a term of years between themselves and the business of getting on in the world, unless they believe that ultimately, because of this interval, they may count upon a better living? If such a view is sufficiently prevalent to create what may be termed a popular demand; and if, further, it is the duty of a college, like that of a modern newspaper, to cater to popular demands, then is it the duty of the college to supply each eager individual as quickly and accurately as possible such information as may be necessary to fit him for business or professional specialization; grant him his degree at the earliest moment possible, and hurry him to the next shop for further polishing, or else turn him out as a finished product, a perfected prop to the universe. In short, it is the duty of the college to teach a man how to make a living.

To put the matter thus is to strip it of complicating considerations and to present it baldly in what must be to many a new form. But such, after all, seems the basic idea of the recent movement; an idea, furthermore, whose adoption seems unpleasantly probable. Certainly it is as far removed as the poles from the idea which animated the huddled groups of mediæval scholars, founders of the universities, and which has prevailed in institutions of higher learning until very recent years. The long-restrained pendulum has, in its first swing, cut an amazing arc. For if the new idea is to teach a man how to make a living, the old was to teach a man how to live: there is a vast difference between the two.

As a matter of fact, it would seem that to-day the manifest duty of the college is neither that of turning out men who know how to live, or that of turning out men who know how to make a living: but the very complex duty of turning out men who shall be able to gain a fair share of this world's goods and having so done shall know how best to use them. Can it be possible that for the accomplishment of this twofold end a shorter period of years is necessary than for the accomplishment of the simple one?

But perhaps this question is beside the point; perhaps it is a condition rather than a theory that looms up before us; perhaps it is not so much what should be done as what must be done. The four-years' course is too long; it takes too much time from the active business of life. And it is too long by just a twelvemonth. Cut off this twelvemonth from the curriculum and add it to specialization, whether of the graduate school or of the counting-house, and you have routed a full swarm of the evils which threaten modern society.

In the heat of the discussion that has arisen in the matter, it would seem that a certain due sense of proportion has been lost. For if a man's college course means anything at all, it means an important, perhaps a determining, factor in his life, and the mutilation of it to the extent of its crowning fourth part must needs far outweigh the advantage arising from adding one-fiftieth part to the active portion of the threescore years and ten.

To give a man knowledge is one thing: to give him a fair share of wisdom is another. Knowledge may come as the result of accomplishing a certain amount of intellectual labor, the time required varying with the receptivity and diligence of the student. Wisdom, which is digested knowledge, is a matter of slow growth. It does not readily lend itself to a forcing process. Such wisdom as the candidate for the bachelor's degree may boast is a compound of two elements: his curriculum and his college associations.

As for the former, it may be quite confidently asserted that the average college youth does not know what is good for him. It is delightful to conjure up a picture of the prospective fresh-

man eagerly scanning the field of knowledge as it is represented by his elective blank, and wisely making choice of those things which are to count for his best educational advancement. It is still more delightful to picture him year by year steadily progressing along lines laid down by himself until he is prepared to join the ranks of the world's workers. The only difficulty with this picture is that, as anyone who has recently been a student or has had dealings with students must admit, it is not true.

As has already been stated, the majority of young men believe that in some way their college course will enable them to gain a better livelihood than they could hope for after the usual work of the secondary school. They cherish this belief, too, whether they have entered college of their own volition or in response to the entreaties or the commands of hopeful parents. If earnest, zealous individuals, they will expect the desired result to rest upon careful attention to such studies as may be included in their chosen field of work. If not, they will, with lazy optimism, view their diploma as the open sesame to all good things and will devote themselves to the securing of that diploma by doing the minimum of work in those courses which lie along the primrose path of least resistance.

The broader the elective field, the more disastrous the result. No doubt the sooner, under such conditions, men can be given their degrees the better. The one class is fairly certain to be narrow; the other to be undeveloped. Of the two, perhaps there is more chance for the latter. To be sure, we have all known men who, while daily fingering the dryest bones of science, yet devoted their leisure hours to humanistic pursuits, lest they should become onesided. But such men are exceptions. The probabilities favor narrowness in direct proportion to the breadth and freedom of electives.

A college education is unquestionably a preparation for something. If it is more than a preparation for business or for some specific profession; if it is more than a period of blissful laziness before one shall have to think and act; if, in other words, it is a preparation for life, with all that life physically and spiritually implies, the case assumes a different

aspect. If the average man does not know what is good for him he must be prescribed for. Nor does prescription mean a general inflexible formula applied to the specific case. It means the proper development of evident and perhaps already active powers, but at the same time it means the wakening into consciousness of other powers, half perceived, sometimes entirely latent. Since no man can entirely dissociate himself from his kind, the embryo scientist should be required to devote some part of his attention to the humanities, the litterateur to understand and sympathize with the interests of his scientific brother, the business man to find fellowship with both. In each the spiritual sense should be aroused, the finer emotions kindled by contact with and understanding of the revelations of truth and beauty, which master minds of all time have given thru the medium of music, literature, and the fine arts. Men who have experienced a course of wisely grouped studies are not likely to emerge into the world either warped or undeveloped. They will approach what should be the college ideal of men—men of keen insight, yet broad vision; quick perception, yet sound judgment; practical wisdom, yet sensitive refinement. But such men are seldom the product of a brief term of cramming.

In a measure, the highly developed universities have recognized this in their demand that the bachelor's degree be prerequisite to the degree in law, medicine, philosophy, or divinity. But the danger which threatens the efficiency of the highly developed university is that, in its zeal for promoting postgraduate work, it shall look more and more upon the academic department, not as an independent and important organism, but as an adjunct entirely subsidiary to the more advanced schools. It is a noteworthy fact that the plea for the shortened academic course comes in the main from the university, and for the sake of the graduate department. The colleges, whose strength lies only in the quality of their undergraduate training, have generally taken a different stand. The more the university invests its capital in specialized schools, the greater the number of learned men it employs in profound special investigation, the more it withdraws itself from sympathetic interest in the academic student and his problems. So true is this that

the demand has already been made that the universities should show cause why they should not abandon their undergraduate departments, leaving the work of those departments to the independent colleges, just as the demand was long since made that the colleges should show cause why they should burden themselves with preparatory classes and, in so doing, usurp the proper function of the high school.

It has already been said that the classroom work, the recitations, the lectures, the burning of nocturnal oil, do not constitute the only element which goes to the making of a college educated man. An important element, indeed, what the undergraduate scorner of books is pleased to consider the important element, is college association. It is a trite saying, but none the less true, that the college is a microcosm: it is a small world with the advantage of accessibility at all points. Here it is that one gains the best knowledge of men; not as a classroom study, but in the intimate acquaintance of the dormitory, the athletic field, and the academic rostrum. Here it is, too, that by his influence in activities other than those of the classroom, one learns to gauge his own powers. Let these activities be cut out and their place supplied with studies so arranged as to permit of nothing else than the mere accomplishment of a given number of hours in a reduced period of time, and the college course will be robbed of an incalculable part of its efficiency. During its period takes place the change from boyhood to manhood, gradual, yet of inestimable importance physically and mentally. It is no time for forcing processes of any kind.

Naturally, there are in every institution exceptional men, exceptional because of age or mental endowment, who can easily master in a limited period what others require years to approach. Unduly to hamper or confine these men would be a grievous mistake. But when they appear it is a simple matter to make for them special provision. Their less brilliant fellows can never too thoroly appreciate the importance of the work that the world requires of them, or the need of a preparation commensurate with it.

HOMER EATON KEYES,
Dartmouth College, B. L., 1900

HANOVER, N. H.

VII

THIRTY YEARS' GROWTH OF GERMAN UNIVERSITIES

An examination of the statistical returns of the attendance at German universities and colleges for the thirty years which have elapsed since the Franco-Prussian War proves beyond all doubt that the intellectual progress of the nation has not merely equaled, but even far outstripped, the growth of material prosperity which followed the foundation of the empire.

The population of a country, altho not an exact measure, can safely be regarded as an approximate index of its prosperity; consequently, we can infer a considerable degree of economical success from the fact that the number of individuals belonging to the male sex in Germany has risen from some twenty million, in 1870, to almost as much as twenty-eight million in 1900. Yet even such a remarkable growth sinks into comparative insignificance beside that of the students at the colleges and universities; for they are actually slightly more than two and a half times as numerous as they were thirty years ago. More accurately, the increase of the male population amounts to 38.9 per cent., while, on the other hand, the number of students has grown to the wonderful extent of 163.8 per cent.

These interesting percentages refer principally to the universities and the technical high schools (technische Hochschulen), but the less important academies for mining and for forestry and the veterinary and agricultural colleges are also included in the returns. The relative proportions in which the various teaching bodies contributed to the results summarized above will be perceived from the following table, which gives the distribution of the students amongst the different classes of institutions. The figures are for the winter half of

each year, when the attendance at the universities is on an average 4.5 per cent. greater than during the summer term.

TABLE

SHOWING THE DISTRIBUTION OF STUDENTS AMONGST THE VARIOUS TYPES OF COLLEGES

In the Winter Term of	Universities	Technical High Schools	Schools of Forestry	Schools of Mining	Veterinary Colleges	Agricultural Colleges
1869/70	13,674	2,928	261	144	267	357
1872/73	15,201	4,163	317	168	271	298
1875/76	16,726	5,449	269	264	284	269
1880/81	21,210	3,377	394	262	436	353
1885/86	27,265	2,549	394	344	735	468
1888/89	29,057	2,887	386	343	962	483
1891/92	27,398	4,209	255	389	1047	694
1896/97	29,476	7,747	330	523	1140	1070
1899/1900	32,834	10,412	278	763	1343	890

It will be seen at a glance that, with the single exception of the schools of forestry, an increase in numbers has taken place to a very marked extent under each of the headings. In size and importance the technical high schools take second place and alone are comparable with the universities. Contrasting the growth of the corporations included in these two classes, we find that up to the year 1892 the Hochschulen have lagged behind the fairly uniform development of the universities, but have since then expanded much more rapidly, and at the present time occupy a very high place in public estimation. So great is the importance of these institutions and so remarkably do they seem to have adapted themselves to modern necessities, that a more detailed reference to them may justifiably be postponed for a moment.

The increase in the number of students at the schools of mining and of agriculture is relatively large; it is the result of a deliberate expansion of these colleges in the attempt to develop to the full the natural resources of the country and to derive the greatest benefit from the recent impetus given to German commerce. Too much importance must not be attached to the distinct decline in the attendance at the agricultural schools after it had almost exactly trebled. The fall has been attributed to a depressed condition of agriculture, the existence of which is somewhat problematical. On the other hand, it has been asserted that the figures are deceptive and that the true

explanation is to be found in the fact that pupils belonging to the better classes have, of recent years, preferred to study in the agricultural departments of the universities rather than at colleges primarily intended for peasants. The supporters of this view hold that no real diminution has taken place in the number of students of agriculture.

The veterinary colleges have also experienced a remarkable growth which finds a counterpoise, as regards its effect on the final result, in the stationary condition of the schools of forestry. The state administration of forestry had been brought to the pitch of perfection more than a century ago; indeed, in some districts, in the province of Hanover, for example, it is claimed that the local system has been maintained at the present high standard for the last two hundred years. As a consequence, the duties of the forest service and the strength of the staff vary but little, and the academies, from which the coveted vacancies in its ranks are filled, show only trifling changes in their numbers. Positions in the department are eagerly sought after, and temporary fluctuations in the size of the schools of forestry are to be ascribed to the overcrowded condition of the service.

Owing, however, to the preponderance of the attendance recorded for the universities and Hochschulen, the minor bodies have a proportionate insignificant influence on the totals which are exhibited in the following table:

TABLE

SHOWING THE PROPORTION OF STUDENTS TO MALE POPULATION

IN THE WINTER TERM OF	NUMBER OF STUDENTS	NUMBER OF MALES	NUMBER OF STUDENTS PER 10,000 MALES
1869/70	17,631	19,965,000	8 83
1872/73	20,418	20,360,000	10.03
1875/76	23,261	20,986,000	11 08
1880/81	26,032	22,185,000	11.73
1885/86	31,755	22,933,000	13.85
1888/89	34,118	23,712,000	14 39
1891/92	33,992	24,504,000	13.87
1896/97	40,286	25,661,000	15 70
1899/1900	46,520	27,731,000	16.78

The last column, giving the number of students for every

10,000 of male population, presents the results in their most interesting form. The increase in the number of students during the interval under consideration is remarkable, not only in itself, but in its relation to the steady growth of the number of males; not only is the student population greater by 163.8 per cent. than it was just before the war which led to the foundation of the German Empire, but the fraction which it forms of the stronger sex in Germany has actually all but doubled.

Had this ratio been stationary at the beginning of the period, some years would have had to elapse before the undergraduates of to-day and of the immediate future would have passed out into the world in sufficient numbers to raise the proportion of university men amongst the general mass of the nation to twice its value thirty years ago. But where the rate of variation of this ratio remains constant, as it undoubtedly did in Germany for some time previous to the last third of the century just ended, the proportion of the population which has gone thru a university course will be altered during a similar interval in the same ratio as the proportion of students in the nation. It is obvious that a certain time is required, where the rate of change of the latter proportion is not uniform, before the altered output of graduates affects to a similar degree the proportion of highly educated persons in a state; but, on the contrary, if we can assume that the former has changed at an approximately uniform rate, then we can infer an alteration of the latter at the same rate.

The idea must be guarded against, that an equality of the two proportions is implied in this reasoning; such an implication would be an absurdity, for graduates always greatly outnumber undergraduates. Their relative magnitude is in reality closely dependent on the national rate of mortality. The intention is to establish clearly that, given a condition of uniform change, an alteration of the proportion of students in a community is accompanied by an alteration of the proportion of graduates in an exactly similar ratio.

It follows, then, that if such an assumption is justified in the case of Germany, the proportion of Germans who have had the

advantage of university culture has doubled in the last thirty years.

That the learned and cultured element in a great civilized nation should have enlarged twofold in the course of a generation is, indeed, a remarkable fact. It constitutes an attainment in education which becomes still more impressive when, remembering that the nearer the ideal is approached the slower is the advance towards perfection, we reflect that the country which can boast of such a rapid diffusion of higher studies can claim to have held for more than a century past the foremost place in educational progress.

Of hardly less deep interest is the steady alteration in the distribution of the students amongst the various headings. The change is the manifestation of tendencies which have for some time past found repeated expression in German educational writings of a theoretical nature, but which have only recently forged a path into the province of practical education. The inflow of pupils into the different technical colleges and the uninterrupted enlargement of these at the expense of the universities during the last decade are a proof of the high appreciation by the general public of the value of a special education, and seem to point to a further development of technical institutions.

The next table is intended to throw into relief the remarkable shifting which has occurred in the last ten years. It gives for three several years the percentage which the pupils of each species of college formed of the total number of students, and is based on the attendance of the winter term of the corresponding year.

TABLE

SHOWING PERCENTAGE OF STUDENTS IN EACH FORM OF INSTITUTION

Year	Universities	Technical High Schools	Schools of Forestry	Schools of Mining	Veterinary Colleges	Agricultural Colleges
1891/92	80.60	12.38	.75	1.15	3.08	2.04
1896/97	73.17	19.23	.81	1.31	2.83	2.65
1899/1900	70.58	22.38	.59	1.64	2.90	1.91

Now, in scanning these figures, the first point to attract attention is that the pupils gained by the technical high schools

have apparently been drawn wholly from the ranks of the universities; for, in the years in question, the students of these bodies, taken together, formed respectively 92.98, 92.4, and 92.96 per cent. of the total, a proportion which is practically constant.

In spite, then, of a considerable increase in the actual number of university students, they have, relatively to the remainder, suffered a diminution amounting to 10 per cent. of the whole; and as this is exactly the fraction gained by the Hochschulen, the pupils lost to the larger teaching bodies must have been absorbed exclusively by their young and flourishing rivals. Further, not only has the ratio representing the proportion of students attending the universities fallen by one-eighth of its former value, while the corresponding ratio for the Hochschulen has risen by four-fifths, but the actual numbers as plainly reveal the magnitude of the change which has been in operation during this short period of eight years. The numbers at the universities have been increased by 19 per cent., those at the Hochschulen to the far greater extent of 147 per cent.

It is obvious that no deliberate transference of individual pupils has, as a general rule, occurred, but that an ever-increasing proportion of young students who have successfully stood the ordeal of the leaving examination, which is a requisite preliminary to matriculation at the university, have been guided in their choice of a career by the practical necessities of modern life, in response to which the development of the Hochschulen commenced. A considerable number of these students, after finishing their course, used to devote a year to special study at the university with the object of obtaining the degree of Doctor, in addition to the diploma awarded by the technical high schools. This can now be effected directly by all students at Hochschulen who hold the certificate of maturity of a higher school as well as the diploma in engineering. Hardly more than two years ago the valuable educational work of three of these institutions which are situated in Prussia received official recognition in a decree granting them the coveted right to confer the title of Doctor of Engineering, the only honor of the nature of a degree which they are entitled to bestow.

This unexpected step, which came as a great surprise even to the most enthusiastic supporters of the Hochschulen, was, without doubt, mainly due to the initiative of the Emperor acting in the subordinate capacity of King of Prussia. The friendly feeling he entertains for Dr. Slaby of the technical high school at Charlottenburg has contributed largely to the favor with which he regards these institutions.

The regulations for the new degree were issued only a year ago, and have been in operation too short a time to admit of an estimate of its value as a scientific qualification. The effects of the measure will certainly be far-reaching, for the remaining German states must of necessity soon follow the lead of the most important, or else submit to the alternative of seeing a portion of their students pass over yearly to Prussian Hochschulen, which offer them the possibility of crowning their technical studies with a degree.

With the intention, however, of conciliating the universities who regarded the privilege as a serious infringement of their prescriptive rights, the degree was given such a form that there could be no uncertainty about its source. Everyone who writes before his name Dr.-Ing. proclaims to the world that he holds a degree which is not conferred by any German university. As a result, it is conceivable that a small number of students who have completed their course at the Hochschule will still continue to seek the higher doctorate at the university; but, even if this is the case, the right to confer a degree is an advantage which will attract an additional number of students.

Since their foundation the Hochschulen have always had accessions to their numbers from another source. In order to gain admission as a student it is only necessary to produce a certificate of removal to the first class of a higher school, whereas the universities require the successful completion of this class. Thus, the advanced technical colleges draw a large proportion of the pupils of the higher non-classical schools, they being shut out by the university regulations from a career in science there.

A complete revolution must occur in German education before the Hochschulen ever effectively rival the universities;

yet the right of conferring a degree has raised their status sufficiently to excite the jealousy of the older institutions, and they have recently been placed on an equal footing in another important respect. Since the framing of the Prussian constitution a representative of each university in the kingdom had always been summoned to the Upper House of Parliament, and a couple of years ago the German Emperor availed himself of his personal prerogative as King of Prussia and called a professor on the staff of each of the three Hochschulen to a seat in the same august body. The action affords signal proof of the Emperor's favor, and augurs well for the future development of the colleges to which he has, in so striking a manner, extended his patronage.

In the immediate future a fresh fillip is destined to become apparent in the statistics of the Hochschulen, for the number of these institutions in Prussia is to be raised by the foundation of a new one at Dantzig in addition to those already in existence at Berlin, Hanover, and Aachen. It is safe to assert that their numbers will be still further increased in the course of the next decade, for the comparatively sudden expansion of these colleges in recent years supplies a serious gap in the national educational system. The progress of invention had opened up new fields of labor for practical scientists, and the development of the Hochschulen offered the readiest method of securing them sufficient facilities for acquiring the requisite training.

The technical Hochschulen are especially adapted to the requirements of large commercial and manufacturing towns; and it is precisely in such industrial centers that opportunities most readily present themselves of completing the year of practical employment on engineering works or in a factory, which is prescribed for the diploma.

A principle, in addition to that just mentioned, has always been an important factor in determining the site of a Hochschule. The establishment of one in a position, in which direct competition between it and a university must ensue, would mean reckless expenditure of public funds. It is not the result of mere chance that in Saxony and Baden we find Hochschulen in Dresden and in Karlsruhe balanced respectively

against the universities of Leipsig and of Heidelberg; altho we must regard it as a remarkable coincidence that a Hochschule should have been assigned to the capitals of a Kingdom and of a Grand Duchy. A similar lot has befallen the capital of the former Kingdom of Hanover. It has now to be content with a Hochschule, because, when the present University of Göttingen was in contemplation in the year 1732, Hofrath Gruber, in his scheme for the new foundation, gave it as his opinion that students' pranks played in the seat of the government and the court would seriously interfere with the respect due to royal authority.

The principle of compensating large towns of recent growth for the absence of a university will prove to be the guiding force in the distribution of the new Hochschulen. This aim has greatly accelerated the establishment of the Hochschule, for which buildings are in process of erection at Dantzig, and it lies at the root of the movement to obtain a similar institution for Hamburg.

These statistics, then, establish two salient features of the recent history of education in Germany: the rapid development of advanced technical schools, and the consistent spread of higher culture more and more widely thru the nation. The trend at present is towards realism; yet humanism, in spite of a relative decline, has numerically not less followers than before, and could look forward with confidence to the future, if it were only reconciled to the partial abandonment of compulsory Greek.

Tendencies which have manifested themselves with such uniformity are bound to endure. The onward movement of the schools of applied science will scarcely diminish in rapidity, until they attain a position in closer keeping with the progress of experimental science. Then all types of education will share, according to their new mutual relations, in the wider diffusion of learning and culture, which has been the uninterruptedly successful work of German universities for the past thirty years, and will as certainly reward their efforts in the century just commenced.

C. E. Wright

Hanover, Germany

VIII

WHY DOES THE SMALL COLLEGE REMAIN SMALL?

A reader of educational literature of the past year remarks that our theories are " not in one bottom trusted," and whether into one port at last our ventures find entry there is none so bold as to prophesy. But it is not mere pastime to toss up straws and watch where sits the wind.

What are the subjects of discussion in the educational world to-day? What currents have been set in motion and what significance have they? What anchors can the smaller colleges cast to windward?

The two great educational movements of the past twenty-five years have been directed toward economic organization: first, the binding together of secondary schools and the State universities, for whose incentive and fulfillment the world acknowledges its obligation to President Angell; second the thoroly organized effort, under the leadership of President Low and Dr. Butler, to do away with the chaotic condition of education arising in the widely different standards both of the entrance and collegiate requirements of our colleges, particularly in the Middle States and Maryland. Both these movements tend to differentiate the college from the university on the one side and the secondary school on the other, and to define the proper and distinctive work of the college.

Our interest now centers in two inquiries: How do the endeavors of the College Entrance Examination Board affect the smaller college? and what conspicuous causes tend to make the small colleges weak and to keep them so?

There is no longer any ground to fear that the well-equipped and adequately endowed college will disappear from the educational system of this country, but there are several reasons why it is certain to undergo important modifications. It is granted, then, that this type will continue because it has a

work to do and the means with which to do it. But the smaller denominational institutions of higher learning must bestir themselves if they are to survive these progressive movements. They must put on their whole armor in defense of life, scarcely allowing themselves time to pause.

Why is it that a college located in a rich and populous district continues from year to year small in numbers and empty of resources? Never in all their history have the smaller colleges been so pressed as now to make answer to the world. They have a right to exist and a great work to do; why, then, do they lack the means with which to do it? For many years they have been the vanguard of culture and of American ideals, and have long borne relation to the well-being of the community like to that which the family bears to the best interest of the state; their welfare is synonymous with the welfare of the community where they are planted. As one of their defenders I am concerned now not to gloss the facts, but with constructive aim to direct attention to the causes of their limitations.

The conspicuous source of weakness of the smaller college is its own errors in organization and policy. These express themselves in false conceptions of a curriculum of studies as shown by farcical measures of entrance and academic requirements, or as one writer phrases it, the elevation of "personal idiosyncrasies into requirements for admission" in the hope of increasing the enrollment; in the instability of the faculty; in the failure to look upon the hour of foundation as entailing continuous responsibility; in the unintentional alienation of the alumni; and in the mistaken supposition that the trained business man of the present day is going to draw his check in response to merely sentimental or hortatory appeals.

Because I am not grumbling, but earnest to offer my little contribution to the solution of this problem, permit me to shift my ground to the constructive side of the discussion and indicate the direction of certain necessary changes.

The primary aim of the smaller college should be the organization of a curriculum of studies that shall command the respect (1) of superintendents and principals of the secondary

schools within the district of its constituency, (2) of the students themselves, and (3) of the universities—for, while the colleges pass judgment upon the secondary schools, the universities assign the colleges their standing.

The smaller colleges cannot expect to be anything better than a clearing-house for the higher class of secondary schools or the distant college of wider report unless they set themselves to fulfill in the conduct of their courses of study their unwritten contract with the students who enter their halls. Ultimate self-preservation depends upon the studies and the enrollment being genuinely academic, not preparatory. The corner-stone of the prosperous college is sound collegiate organization in its twofold phase of (1) a curriculum formulated with a clear knowledge of the best educational thought of the time and with fair understanding of present-day scholarship, and (2) the ability of the faculty to interpret the curriculum and make it significant to the student. The systematic organization now in progress in the secondary schools and the presence in the elementary grades of the teacher who has received specific professional training, will forcefully modify the standards of the college. Educational literature is being too widely disseminated for that institution long to exist which offers essentially preparatory courses and labels them academic. The duration of life of such an institution is exactly proportioned to the measure of enlightenment of the community in whose midst it is planted. In self-defense the institution must make the studies and the student's classification honestly collegiate. Any lower principle of organization is specious and begets a subtle enemy within the college itself. For, the student, decorated with a bachelor's degree conferred by his home college and deeming himself fitted to enter upon the work of the professional or graduate school, is incensed by the discovery that the highest ranking he can get at the university or the larger college of good standing is only that of an undergraduate, in known instances so low even as the sophomore year. An alumnus who is ashamed of his college may be a silent, but none the less a real, foe, since he will not advise students to choose this cheapened alma mater, nor will he send

his own children thither. Moreover, the student of collegiate rank demands the academic atmosphere; he knows what it is from the magazines and from calendars of other colleges which reach him thru the post-office. He is insistent, and, if he find himself outnumbered by the preparatory students or subject to a system of espionage that once obtained in dame-schools, he will go elsewhere or bring his college life to an abrupt close. Further, the smaller college that puts itself in opposition to the thoroly organized efforts of those leading educators who comprise the College Entrance Examination Board, is ultimately, perhaps imminently, doomed; for they have determined to put an end to lax standards and false academic requirements. They are a strong body in close touch with teachers and students, and in a position to influence public sentiment. With them curriculums in the hands of able faculties, not mere enrollment, are the chief titles to continued existence. If there be one hindrance more insidious than another to the prosperity of the small college, it is the ambition to secure increased enrollment at the expense of the curriculum. Development is neither begun nor sustained by mere numbers.

The college is likely to lose desirable students if the curriculum, particularly of required studies, be subject to frequent changes; but these are unavoidable when the head of a department withdraws and some other takes up the work, since the teacher always believes that he can teach best those courses which he has himself organized. Changes in his plan of studies are apt to jar the student's steadiness of purpose and shake his confidence in the abiding worth of culture. For the curriculum can mean nothing to the student apart from the interpretation and exposition which it receives from the faculty from week to week; to him the curriculum is an ever new evolution, a development. Once carefully organized, after thoro and fresh acquaintance with the aims and methods esteemed in the college world to be the standard, the curriculum ought not to be liable to sweeping changes, except after the lapse of years, when progress in ideas has created new values incompatible with the older thought and method. This does not mean that a curriculum may not grow by accretion, partic-

ularly in the elective studies, in order to meet some important demand which a smaller corps of instructors had previously been unable to satisfy. The reputation of a department in a community is also a growth—the invested capital of an institution of learning, according to the educator's point of view; and it suffers when change of heads of departments takes place frequently. A course of study is also property of value to the professor who has outlined the work of a department and supplemented it with necessary references and other material essential to its dignity and verity; but, unhappily for the instructor, even when withdrawal is his advancement, it is not a portable kind of property. Instability of the curriculum, with the consequent weakening of the institution, has been ascribed to the departure, on the part of some smaller colleges, from the method of faculty-appointment uniformly observed in those institutions that have acquired something wider than local recognition. Since the graduate schools of the universities have been elevated to an important place in our educational system, presidents and trustees have, generally, adopted the view that the graduate school is the only learned body authorized to certify the adequacy of a scholar's attainment in his specialty. From this it follows that the larger college rarely appoints on its faculty, as head of a department, anyone who has not won a higher degree in the graduate school of an American or foreign university. It is not so much the ornament attaching to the degree which they esteem of value as the security that inheres in this credential of efficiency granted by the distinguished specialists of the graduate schools. Nor need this higher preparation work hardship to any able and experienced teachers who are in charge of a department, yet have not pursued graduate work; for the practice of the better colleges of granting members of their faculties leave of absence at intervals makes it possible for such persons still to extend acquaintance with their subjects by residence at a university.

In discussing the next cause of weakness of the small college as it exists to-day, it is hard to screw one's courage to the sticking point and say, *Thou ailest here and here!* He seems an ingrate who would point out the least flaw in a service that is

too often unthanked, usually unsought, and always unpaid. Taking courage from that higher academic purpose which treads the meretricious motive underfoot and ignores every selfish interest, I make so bold as to declare that a conspicuous weakness lies in the appointment and organization of boards of trustees. In the great college or university, boards of trustees do not loom large to the public eye, the faculties occupying nearly the whole field of vision of that student or parent who is selecting a college. And these faculties are about as large as they look—they practically prescribe the policy of the institution. Given an able financier in the president of the college or in the financial committee, it does not much matter how many inactive members the list of trustees may register. Far different is the place of the trustees of the small colleges, and quite other the dependence of the institution upon them. In two particulars they hold its fate in their keeping: thru their educational committee they guarantee to the public the worth and stability of the academic part, and the names of their finance committee testify that grounds and buildings given in trust to the college will be honorably guarded, and that money bequeathed will be safely and advantageously invested. Many a man who accumulated his fortune by his own efforts would—apprehending how soon his family will divide and distribute his treasure—be glad to perpetuate the memory of his labors by putting some part of his fortune at the service of an institution whose location is the scene of his endeavors and whose site recalls the history of his career. Such a man demands this guarantee from a finance committee who have accepted their responsibilities as an inviolable trust and who will not neglectfully delegate that trust to untried substitutes. The eyes of patrons are upon the trustees and no board can afford to have persons indifferent to the college interests in their membership. The onus of indifference often does not originally rest with the negligent member. At the outset he was not asked to take an active part, but merely to lend his name, in the secret hope that by and by he would give money; he lends his name and it is plainly illogical to charge him with unfaithfulness to an interest which he never pro-

fessed. Indulge me further, while I note the outworking of such a method of appointment. Approach a citizen for money, or in the expectation of interesting him to send his son or daughter to the college—he does not leave you a pin on which to hang your arguments in his reply: "If this is so excellent a college, and if money is so advantageously invested in it, why doesn't John Ingram send his son to you, or Jacob Rich give you a handful of his shekels, since they are your trustees?" This reply points to the skeleton in the college closet, and you turn away mortified, and disappointed of your errand. Thus, the great name is after all mere print and paper as adventitious as the reasoning which sought the favor of placing it on the list of trustees.

Another reason why the small college is small is the mistaken assumption that colleges are paying business organizations. Educational institutions, like churches, never pay. We establish them and support them because they are the foundation-stone of civilization—hence the condition of all the enlightened activities of the age. Without popular education we should revert to barbarism, and, deprived of the college and university, business could not sustain itself. It is an economic advantage for capital to support education, for, lacking it, no material organization, not even the trust, could exist for a single generation. No, indeed! If the answer must be in figures, write it a minus quantity at once. All the well-to-do colleges are living off their endowment, and, if it be temporarily lessened or suspended, as was lately the case at Yale, Johns Hopkins, Wellesley, and elsewhere, the institution is speedily thousands of dollars in debt.

This being the state of exhaustion in the smaller colleges, is there strength enough for recuperation?

The sources of strength are as many as the causes of weakness: (1) sound academic organization; (2) boards of trustees who assume their responsibilities seriously, not sentimentally, and who organize themselves for effective service, as they do in the business world; (3) the securing of able faculties and the assurance of their permanence; (4) the fact that behind the college are the people, either the taxpayer, the religious society,

or an interested community, who pledged themselves in the hour of foundation to give the college effective support; (5) systematic effort to inform the public what the best educators are thinking and doing, to point out the wiser method, and acquaint the public with the high privilege of maintaining educational interests; (6) finally, the devotion of alumni who do not shrink from self-sacrifice, in time and money, because they realize that the chief defense of culture must come from those who have enjoyed its advantages. The alumni represent to the world the college's ideal.

Thus reinvigoration is possible by following those self-protective processes observed daily in the physical world. Whenever the forces of life are permitted to operate with sufficient freedom within the organism itself to insure a proper measure of continued vitality and to create wholesome regard for the energy of its own activity, then is the creature able to fill its appointed place in the natural order. Similarly, when the smaller college adopts like self-sustaining methods or organized endeavor, in obedience to laws operative within itself, and with due observance of regulated activities outside itself in parallel fields, then will it become a productive activity and increasingly a power at home and possibly abroad.

ELLA A. KNAPP

PITTSBURGH, PA.

IX

DISCUSSION

THE SUPERINTENDENT AND THE COURSE IN ARITHMETIC

Arithmetic is taught in France, says Professor James Pierpont in the *Bulletin of the American Mathematical Society*[1] as a science, and not, as in this country, as a set of rules to be learned. Because it is taught this way it appears thruout the mathematical course, and not at the beginning only. The same remarks with equal force can be made concerning the teaching of arithmetic in Germany. Another characteristic of the French view of the teaching of arithmetic is seen in the fact that all thru the earlier years of the course only two hours a week are given to it, while later on, when the pupil has finished the elementary part, the two hours jump to ten. Doubtless the thought is that most of arithmetic is reasoning, and hence should be taught late rather than early. Our view of the place and use of arithmetic evidently is very different from this.

If any change is to be made from present customs in our system, it must come thru the superintendent. With the consent of his board the superintendent of a system of schools is expected to frame his own course of study and plan the work for it. But the planning of the work in any particular branch, as arithmetic, may go no further than the prescribing of such and such topics to be studied in such and such grades, or it may go to the extent of the superintendent's organizing in his own mind the whole work and correlating it with the other branches of mathematics and with the other departments of study. In the former case the topics are little more than isolated names: in the latter they are parts of an organized whole. As between these two courses the latter promises vastly better results.

The first problem which will present itself in the planning of the course is the determining what shall be done in each of the

[1] March, 1900.

three departments of an elementary school. What shall be taught in the primary department, and how it shall be taught, is of great importance. A good start in any study has more to do with subsequent success or failure in it than anything else. Shall the pupil be early pushed on into a study of problems and the fundamental operations in the Arabic notation, or shall these topics be held back and more time be spent on easier exercises, as, for instance, on fixing the fundamental facts of the science by longer drill? Professor Smith in his *Teaching of elementary mathematics* seems to agree with General Francis A. Walker's contention that the latter is the better plan. Certainly this view accords better with the plan pursued in France. Much of what is needed for the study of formal arithmetic will have been absorbed by the scholar without conscious effort by the time he reaches this study, if the latter has been deferred. If the superintendent can plan to have this preparatory work done thoroly, he will have laid a good foundation for subsequent success.

Turning to the work of the intermediate department we find a blunder almost universally made at the start because the laws which underlie the processes of addition, subtraction, multiplication, and division are not properly exemplified and enunciated. These laws are (1) That the order or way in which numbers are added or multiplied does not affect, and (2) In multiplying one sum by another every part of the multiplicand must be multiplied by each part of the multiplier and the results added. The first of these prepares the pupil to see in the operation of adding, *e. g.*, 28 and 46, that $28 + 46 = 20 + 8 + 40 + 6 = (20 + 40) + (8 + 6) = 60 + 14 = 74$. Without the introduction of this principle the most that can be explained to the pupil is the *how* of the process, not the why's. The second principle is not so easily made clear to the pupil, but it can be exemplified to him by simple concrete examples: as, *e. g.*, in the problem—Each of three upstairs rooms has 4 straight-backed and 2 rocking chairs, and each of five downstairs rooms has 4 straight-backed and 2 rocking chairs. How many chairs are in the house? This problem evidently calls for the multiplication of $4+2$ by $3+5$, and each partial product can be described. These laws serve to explain all the simple

operations: but they do more. They make plain many important operations all thru arithmetic and algebra. Thus, the second law underlies the aliquot parts and all such methods of counting: it explains multiplication and division of compound numbers; the multiplication of one mixed number by another; the multiplication of one polynominal by another in algebra, etc., etc. Without possession of this law, the pupil must have the how explained to him every time he comes upon a new kind of problem; with the principle the pupil ought to be able to solve the problem himself. Nineteen out of twenty pupils, when they learn how to multiply two polynominals together in algebra think they have learned something new. Really, it should be a very old story.

A thing the superintendent should have in mind, as he plans the intermediate and grammar work, is that the number of general principles or problems which must be learned, to know arithmetic thoroly, is surprisingly small. To the boy studying the subject for the first time, and often to the teacher, it is a maze of processes and rules; but the superintendent knows that its fundamental principles and cases can be reduced to a dozen, all highly fruitful. The superintendent should see to it that these are all well taught and thoroly drilled into the scholars, tho it may not be desirable to give some of them formal statement. Named in order, they are: (1) The laws referred to above; (2) the two working principles for finding common factors; (3) the principles of division (or fractions); (4) the problems or cases of analysis-proportion-percentage; (5) the rules for finding areas and volumes of simple figures in terms of their appropriate units.

Analysis, proportion, and percentage should be closely correlated, since they all deal with the same type of problem and have the same cases. The pupil should be trained to take any problem in either of the three and translate it into the language of the other two. Ability to do this will go far towards perfecting the pupil's knowledge of arithmetic. He should be led to see that ratio and proportion, properly used, often possess an advantage over analysis. The superintendent would do well to keep in mind that the typical problem of analysis and proportion is not, strictly speaking, very practical, but gets its

prominence on account of the mental training it gives. For this reason, in teaching these subjects the *form* of reasoning should be made prominent.

The superintendent's aim in outlining the work in the grammar department should be to make the pupil *expert* and *reliable* in all simple numerical calculations, to teach the methods of the business world, and to introduce some of the elements of algebra and geometry.[2] That this aim is much higher than that commonly kept in view is probable. Is it feasible?

To make the scholar expert in simple calculations it is indispensable that he be given a large amount of exercise in such calculations and that he be taught other general methods besides the ordinary one. By a general method is meant one by which almost any practical problem involving multiplications and divisions can be worked. It is likely that the great majority of teachers are ignorant of the existence of such methods, and, naturally, they are not taught. But if the instruction in the schools in arithmetic is to be brought up to a plane which will be respected by the business world, it will have to include the methods just referred to. By the ordinary method is meant the seriatim performance of all the operations called for. By advanced general method is meant visualization, or aliquot parts, or any converging solution, or cancellation, or some such method. By visualization here is meant seeing the object dealt with itself partitioned out in some way for solution. By the convergence method is meant calculating the value of some quantity near to the given quantity, but which is easy to calculate, and going from that to the value of the given quantity. To use these methods intelligently a special study of each must be pursued much as the pupil studies interest or proportion or percentage. Fortunately, the study of these methods can be best carried out in topical or general reviews. It may be remarked that the advanced methods are the ones used by practical men, since nine times out of ten one or other will cut the labor of calculation to half that by the ordinary method. Moreover, they furnish the best means of checking the accuracy of a result.

[2] The Germans introduce geometry before algebra. *Cf.* Young's *The Teaching of mathematics in Prussia*, p. 47, 133.

Enough has been said to show that if the course in arithmetic is to be enriched by studies like those described, the initiative must come from the superintendent. He will see, if he makes a study of the question, that such studies have much culture as well as practical value. They should, of course, be continued in the high school, if arithmetic is taught there.

As regards the more advanced portions of the applications of percentage the Committee of Ten hold the view that they should be cut out of the course for the reason that the pupil is not in position to understand the methods of business involved. If this means the cutting out of these topics entirely it would seem to be a mistake. The alternative offered is to increase the time allowed for explaining thoroly the methods of business and make the numerical calculations subordinate to the other explanatory part. This, or nearly this, is what has been done in some topics in certain recent arithmetics. Scholars are entitled to a knowledge of the methods of business quite as much as to an acquaintance with the technicalities of grammar or geography, and they can learn the one when presented with an abundance of illustration and explanation quite as readily as the other. Says a recent writer who has given the whole question careful study: "Commercial paper or banks and banking can scarcely be too fully taught. The facts are interesting to the limit. Every boy and girl should know about them."

Concerning the introduction of algebra and geometry into the grammar grade little need be added beyond what has been said, that it is done with most satisfactory results in other countries and in some schools in this country. The geometry can well take the place of the old mensuration and the algebra that of the puzzle problems.

To make still more room for the work outlined above, the superintendent should go thru the text-book he may have in use with a big blue pencil. He should see to it that problems involving large numbers are not too numerous, that greatest common divisor as a special topic is thrown out, that lowest common multiple is put into addition of fractions, that longitude and time is turned over to geography, taxes and duties and customs to civil government, and that a vast deal of matter commonly given in denominate numbers is forcibly ejected.

Thus all of addition, subtraction, multiplication, and division of compound denominate numbers should be marked *delete*, as also all problems which involve quantities expressed in more than two denominations. Such a problem as, Reduce 2 mi. 30 rds. 5 yds. 2 ft. 5 inches to inches is as absurd as Munchausen history. It is evidently the product of some schoolmaster's disordered invention, and not of actual experience. Such, however, is the force of custom that numerous problems of this type are to be found in most arithmetics to this day. In actual life most quantities are expressed in one denomination, some in two, and a few in three, but none in five. The superintendent should draw his blue pencil also thru all the tables of denominate numbers, except avoirdupois weight and linear, square, cubic, dry and liquid, and time measures, and all problems under them.

Besides the foregoing, two other topics will deserve the superintendent's most thoughtful attention. They are the place oral and mental arithmetic [3] should occupy in his course, and how the pupil is to secure and retain accuracy in numerical calculation and reasoning. To secure the latter one might as well recognize from the first that the best results can only be attained by teaching the pupil the habit of accuracy from the beginning of his arithmetical career, and that to acquire the habit of accuracy the early and systematic use of checks is almost a *sine qua non*. If the trained mathematician and calculator has to depend on them for accuracy, *a fortiori* the boy in school must depend on them also.

Reviewing the foregoing suggestions, it can be seen that the attempt is made to organize the different parts of arithmetic under a few guiding principles and methods into a related whole. If the writer is informed aright, the branches of history, geography, government, and natural science itself have been changed of late years from studies of compendiums of more or less unrelated facts to those of systems of knowledge based on a limited number of fundamental ideas. Applying the same thought to arithmetic, the aim has been to provide threads of connection which would run all thru the warp of the arithmetical fabric. In closing, we beg to remind superintendents of

[3] See p. 117 in Smith's *The teaching of elementary mathematics*.

an investigation whose results have been recently published, and which appears to go to show that the character of the work done in arithmetic in school depends more on the supervision exercised than on the training or natural qualifications of teachers or on the environment of pupils. In a word that the supervision is the controlling element in school work. If this be true, then it is all the more incumbent on the superintendent to study most carefully the requirements he lays down and make them the most effective possible.

JOSEPH V. COLLINS

STATE NORMAL SCHOOL,
STEVENS POINT, WIS.

X

REVIEWS

Zur Methodik der Kinderpsychologie—By PROFESSOR C. STUMPF, *Zeitschrift für Pädagogische Psychologie u. Pathologie*, February, 1900.

In this address, delivered before the Berlin *Verein für Kinderpsychologie*, Professor Stumpf outlines the various methods of child-psychology and points out the advantages and difficulties of each.

Infancy, which for psychology includes the years of adolescence, may be divided into four periods. The first is that previous to the use of speech; this may be subdivided into the period when speech is not understood and that during which it is understood but not yet used. The second main period extends from the beginning of the use of speech to the entrance into school. The third includes the years of school life previous to adolescence, and the fourth, the period of adolescence itself.

During the two first periods the parent and the physician are the chief observers: during the two last, the teacher.

The parents have especial interest in the child's earliest development, but they are likely to overestimate evidences of development: particularly is this true in the case of the first-born, where there is no standard of comparison. And in comparing their children parents are in danger of overestimating their differences and underestimating their similarities, while strangers fall into the opposite error. Only the greatest care, with constant attention to observations of others, and study of the general process of development can correct these faults. But studies of this kind, if carefully made, are of very great value; witness those of Preyer and Darwin.

The physician too has some peculiar advantages as an observer. He sees the working of the child mind at critical moments, and he is especially fitted to observe the relation of mind and body.

The advantage of the teacher lies in the fact that he can

study many children; he can compare better and judge more objectively than the parent. But he is in danger of judging by narrow standards or according to a few rules or types. Moreover, he sees children under circumstances that are not the most free and open. The psychologists, including the physiologists who are interested in the psychological problems, may belong to one or more of the classes mentioned above. It is their business to treat the data scientifically.

There are two possible methods of obtaining the data, the direct and the indirect: the first is the immediate observation of mental states, introspection, self-observation; the second is the observation of the outward expression of mental states. The field for the application of the first is our own memory, the self-observations of children recorded in diaries, letters, etc., and the self-observations contained in autobiographies. The value of the first and last sources is not great: it is very hard for an adult to separate truth from fiction in the recollections of his childhood. The memory of a vivid dream or the story of some early experience related by parents is often mistaken for genuine memory. The child's self-observations are not readily accessible. If children are led to make and record observations of this kind at the suggestion of others, the results are influenced by this fact and are not satisfactory. Such self-examination may also be harmful to the child.

The principal method must be the indirect, as in animal psychology. This may be applied to the investigation of one or a few individuals in the thoro study of a few problems; or to a large number of persons, by the statistical method.

In investigations of the first sort, those conducted without the use of speech, should be separated from those in which speech is used. Previous to speech, actions and reactions are observed, such as movements of the extremities, of the facial muscles and of the trunk, the secretion of the glands, inarticulate cries, changes of pulse, etc.

The stimuli to these reactions may be from without or from within. Thru the former we can ascertain the awakening of sense-functions and of sense-pleasure and pain; and later the setting free of memory and intellectual activities thru sensation. The reactions to inner stimuli, the so-called spontaneous move-

ments, are also important. The principal question here is in regard to effects of volition, or the comparison of voluntary and spontaneous movements.

These observations of the child previous to his use of speech are particularly important because during this period the foundations of the whole mental life are laid. Apparently, general concepts come very early into play and first lead to the understanding and development of speech. Genetic investigation, to be fundamental, must explore this dark and difficult region. The principal difficulties result from the fact that we can hardly avoid going in a circle. We observe certain movements. But a movement can have very distinct causes; it may be voluntary or involuntary; it may result from a feeling or follow purely physiologically, without consciousness. What psychical states can we affirm of the infant? We can only interpret his movements by other movements. We see movements as of anger even in the worm: we observe actions which are apparently deliberative in the infant. We interpret movements and found our interpretation on what we wish to interpret. We can get out of the circle only thru the analysis of the developed mind. We must interpret by our own experience, we must find its simplest factors. If a given emotion involves ideas and judgments which can be acquired only by long experience, it is clear that this emotion cannot be present as an original one. For example, fear, the idea of a danger, of a harmful, terrifying event, involves experience, and the shrinking movements which we are inclined to explain by this emotion are originally merely physiological reflexes, (These reflexes may of course be the effects of the experience of earlier generations.)

The question is particularly acute in regard to the will. Wundt combats the idea that will is a product of development in the individual life. That depends on the meaning given to the term will. If it involves the idea of effect, of consequence, there must be development.

Thus we see the peculiar situation of infant psychology. It presupposes adult psychology. Without firm and definite ideas of the elements of mental life and their interaction as we observe it in ourselves, disputes about the mind of the child

are entirely fruitless: so long as we are not at one about the principal questions of the former, we will not agree in the interpretation of the latter. Yet the analysis of the adult mind must be completed with constant regard to the possibility of showing its natural development.

The second class of observations and investigations is characterized by the use of speech. The child may here be made a conscious agent in solving the problems of his mental life. He may be tested in the recognition and meaning of colors and other sense impressions, in the reproduction of objects by means of drawings, in the description of pictures he has seen, the recounting of stories, the capacity to make sentences or stories out of series of words, quickness and accuracy of movements, etc.

Special observations may be made on the blind, the deaf, the weak-minded; comparison of these with normal children may give valuable results. Observation of youthful prodigies may also be of value.

A constant source of error is the child's unscientific frame of mind. He lacks concentration, interest, and conscientiousness. The patience of the observer and the number of his observations are necessary to correct this.

The questions asked are sometimes difficult for the child to understand; often they are self-evident or useless.

There are still greater errors in the interpretation of results. A result may be produced by one of many causes. The description of results is often faulty and due precautions are not always taken in the observations and experiments.

The aims in all these investigations are essentially two: knowledge of the disposition, and knowledge of the factors thru which the disposition can be developed in certain directions. Everyone knows that men are born with various dispositions. The first point is to define clearly the concept of disposition and wherein dispositions differ. Understanding, will-power, character, imagination, etc., are complex: we must find their roots. To do this, analysis of the adult mind must be put with observations of the child.

An important question is that of the moral disposition of the child. In relation to this, Lombroso's theory of the born crim-

inal is a modern form of the doctrine of original sin. We must here distinguish between the direct moral disposition and dispositions favorable to morality.

It is the latter which can be directed. A disposition to pity or to sympathy is not immediately moral, tho favorable to the development of morality; and dispositions of this sort should be observed and directed.

It must be remembered that a disposition does not necessarily appear as such at the beginning of life—some do not appear until the age of puberty. The inborn may be distinguished from the inherited. Some inborn tendencies do not come from parents or grandparents, but are accidental variations. We should always observe how far the peculiarities of children are really hereditary. Tradition as well as physical inheritance must be considered.

These studies of disposition and acquisition are included in what has been called individual psychology, or better, type psychology, *i. e.*, the establishment of essential distinctions in the psychical constitution of individuals or types. The old doctrine of the four temperaments was a beginning, but there are many marks which are characteristic of the individual, such as power of discrimination for different senses, reaction time, quickness and degree of fatigue, etc. But we cannot so define an individual thru the sum of these marks that he could be recognized, as in Bertillon's system. Child psychology is, again, important in throwing light on the blending of the acquired and the native elements. The principal conflict in all this is in regard to the choice of criteria. The French of the school of Binet take complex phenomena, such as the power of imagination, thru which individuals are distinguished in life. The child may be asked to form a sentence containing the three words, "tree, inkstand, horse." The result will depend on the ease and wealth of imagination possessed by the child, and also on the school methods to which it has been subject, as well as on social intercourse. This kind of criterion has educational value, but is very difficult to apply. Binet selected five children as belonging to the "feeling" type. Their master, who had known them longer, described them as dull, cold, and insensible.

The Germans, under the leadership of Kräpelin, have used a different method. They take simple phenomena, such as reaction time, quickness of adding numbers, or memory of simple series. This gives more exact results, and should give practical aid to the alienist. But in analyzing the conditions which influence these so-called simple functions, many intricacies are found. Furthermore, this method leaves out of account the feeling side, which influences our whole mental life.

But both these methods, included under type psychology, are to be distinguished from the *statistical* method, which depends for its value on the number of its observations. This method has been a favorite in America, tho also employed by the French. It has considered physiological conditions above all, such as weight, muscular power, etc. As a method, it, too, has some weak points. Its figures may sometimes serve merely to increase errors. There have recently been protests against it, many of them fully justified. Many of the questions in its *questionnaires* suggest their own answers or are of no value to science or education. The statistics showing that out of 845 children, 191 preferred wax dolls, 163 paper dolls, 153 porcelain dolls, etc., are of very great importance—to manufacturers of dolls.

Professor Stumpf favors the view that the study of individual children is more valuable. Statistics may be useful and instructive under proper circumstances, but unless used judiciously this method will bring only discredits on child-study. Questions must be previously studied as broadly as possible and the problem must clearly demand statistical treatment. Professor Stumpf believes that altho child-study may not yet have produced definite results, its observations and reflections are, nevertheless, of value: that children are often better subjects of study than adults; and, finally, that the study of the child-mind is certainly an important part of psychology.

A. L. Jones

Columbia University

Words and their ways in English speech—By J. B. GREENOUGH and G. L. KITTRIDGE. New York: The Macmillan Company, 1901 and 1903. xii+431 p. $1.10, *net*.

Writers on usage have not been, in the past, the best-tempered people in the world. From Bentley down they have displayed a biting malice that would do credit to a savage dancing on a prostrate foe. "You taught me language," says Caliban, "and my profit on't is, I know how to curse." The quotation might fitly appear on the title-page of half the books on words published during the past century. From this sweeping condemnation, however, two works may be exempt—they are Archbishop Trench's *Study of words*, and the book which is now before us for review. It will be interesting to compare these two amiable treatises, especially since the later one appeared exactly half a century after the earlier and seems likely to rival it in popularity.

Turning from one book to the other, the reader notices first the difference in spirit. It is the difference between sentiment and science. Trench's avowed purpose was to make the study of words an aid to moral and religious culture. Language was for him a direct gift from God to man. In it, he thought, are embodied images of beauty and suggestions of greatness that reveal to the earnest student the nobler elements of his nature. "For many a young man," says Trench, "his first discovery that words are living powers has been like the dropping of scales from his eyes, like the acquiring of another sense, or the introduction into a new world." The new book goes to a different tune. Altho in the preface there is reference to "the moments when the amazing phenomenon of articulate speech" comes home to men "as a kind of commonplace miracle," and altho in the closing sentence of the book we are reminded that "words are the signs of thoughts, and thoughts make history," yet, on the whole, the writers are engaged in the sad mechanical exercise of laboriously seeing things as they are. As it happens, the two books contain cognate chapters which furnish basis for a contrast. Trench has a chapter on the "Poetry of words"; the later book has a chapter on "Language as poetry." In Trench's chapter it is obvious in every sentence that the author is interested in the poetry of words

for the sake of the poetry; ultimately, of course, for the sake of the moral. In every sentence of the parallel chapter it is equally obvious that the authors are interested in the prosaic fact. Their sole aim is to verify a law by an accumulation of instances, and their conclusion is not that the principle redounds to the glory of God, or that it has a moral implication, or even that it elevates the mind by raising it to the contemplation of beauty; but simply that it is true, that it is logically sound and workable.

Thus the old order changeth, giving place to new. Some will lament this mutation from wonder to scientific insight, from moral enthusiasm to interest in plain facts; but it is the penalty that must always be paid by the children of a scientific age.

But if there is loss in sentiment, there is great gain in scholarship. Trench was no philologist. He conducted no investigations, he made no discoveries. It is doubtful whether he knew or cared enough about the philology of his day—the day of Bopp, Pott, and the Brothers Grimm—to make critical selection of his authorities; and his learning, even when it was sound, was strictly subordinated to his theology. The present book, on the other hand, is nothing if not scholarly. It is obviously the work of men for whom philological research is not only a passion, but a profession. It exhales an air of authority, of authenticity, of up-to-dateness. One has, in reading it, the comfortable sense that he is behind an impregnable rampart, shielded, temporarily at least, from the hurtling monographs, *Schul-programme*, doctors' dissertations, and other dictionary-material in the rough, with which the philological ether is perpetually clouded.

The final test of such a book, however, is not its scientific accuracy, but its adaptation to the average reader. In this respect, where Trench's work has been superlatively successful, its modern rival is clearly at a disadvantage. It is true that *Words and their ways* is everywhere admirably clear, simple, and interesting; but only now and then does it achieve the complete fusion of charm and erudition, the saturated light, of the earlier work. Perhaps the part of the book least successful in this respect is that treating of the Development of Words.

This is a difficult theme to treat popularly, for a popular treatment means nothing less than an imaginative reconstruction of the speech-activities of our remote ancestors. It means, not an exposition of philological laws, but a picture. Well, what picture of *homo loquens primitivus* will the uninstructed reader get from the following sentences? "We find in our own words . . . certain obvious joints, as it were, which show clearly that the words have been built up out of simple forms by the process of aggregation or combination." "It seems justifiable to conclude that these parts were once independent and were afterward put together, just as we might infer with reference to the parts of any very complex tool." "Stems come into existence by the union of verbal and pronominal roots. Stems are not yet *words* and hence we must not expect to find them existing *separately* in any language." "No such thing as syntax existed in the stem-period." For my part, after reading these sentences, I am able to think of roots only as bolts, of stems only as screw-ends on these bolts, and of inflections only as nuts (mechanical, not edible) which primitive man screwed on the ends. Grotesque as this sounds, it is a fair sample of the confusion wrought in a naïve mind by this popular philology. I question the wisdom of attempting to throw this stem-ology and root-ology on the stereopticon screen. Useful as a kind of philological algebra, a happy scheme of symbolism for the expert in comparative grammar, it is, as regards the concrete realities of language-history, as mythical as Mambrino's helmet.

This is not the same as to say, however, that the authors would have done better to put aside the abstruser philological principles and stuff the reader with curious learning. On the contrary, the crowning merit of the book, in my opinion, is its patient, persistent ferreting out of the fundamental principles which lie behind philological facts. This characteristic makes it an admirable and, indeed, an unrivaled propedeutic to more advanced study. I shall be surprised if the use of this book as a text does not lead to a greatly increased interest in English philology in the higher classes of our colleges and universities.

FRED NEWTON SCOTT

UNIVERSITY OF MICHIGAN

Commercial geography—By JACQUES W. REDWAY, F. R. G. S. New York: Charles Scribner's Sons, 1903. viii+406 p. $1.25.

The almost simultaneous appearance of commercial geographies of a new type by Redway and by Trotter marks an epoch in secondary education. These books are the expression of a new conception of the educational resources of scientific knowledge when expressed in English, and brought into close relation to the economic life of the people. They strive equally to attain genuine education thru the acquisition of knowledge inherently valuable.

Dr. Redway brings to his task the resources of the expert geographer and the student of modern European schools of commerce. To these he adds the educational standards of our best schoolmen. The result is a book of sound geographical knowledge, of intimate economic application, and of genuine educative power.

Most previous so-called commercial geographies, both in English and in German, have been intricate compilations of commercial statistics. It is needless to say that their educational value is small. Contrary to the method of compilation, Dr. Redway pursues that of organization and interpretation. The old books call for memory: his calls for understanding and appreciation.

The contents of his book are, briefly, as follows:

The first seven chapters discuss the significance, the control, and the agencies of commerce. The remainder of the first half of the book consists of a detailed account of the production of raw and manufactured materials used in trade. To take an example, Chapter IX. deals with textile fibers. These are cotton, wool, silk, hemp, etc. Sketch maps are used to show the geographical distribution of each, while the processes of production are described at length. Much care is taken to make the student understand the economic importance of each article. At the close of each chapter there are live questions for discussion, and topics for study and reference.

The second half of the book is devoted to a study of the commercial activities of the various countries, the United States naturally taking the lead.

The explanation of the commerce of the various regions of

the earth is based upon an adequate description of the physical and climatic conditions controlling production and transportation. Brief, but lucid accounts of the racial peculiarities and educational status of the people of each region accompany the accounts of physical features. In discussing the Iran plateau, for example, a detailed account of the production of Oriental rugs is presented. This is a subject to which the author has evidently given much interested attention.

Can anyone tell why a high-school student should study physical geography as a pure science? Is it not better for him in every way to study the applied science of commercial geography? The science which he thereby acquires will more than make up in quality for what it may lack in quantity. His knowledge will be vital, not theoretical and perfunctory. It will help to make his education seem worth while, since it gives him a warm, intimate contact with the world of real life. We are just beginning to catch glimpses of the possibilities of secondary education for the uplift of the people. The day is not distant when, under the influence of a curriculum made vivid and valuable at every point, the high school will quadruple its numbers and multiply its usefulness manifold. Towards such a consummation this book by Dr. Redway makes no small contribution.

CHARLES DE GARMO

CORNELL UNIVERSITY

Elementary Physiology and Hygiene—By H. W. CONN, Ph. D., Professor of Biology in Wesleyan University. New York: Silver, Burdett & Co., 1903. 272 p. 60 c.

The presentation of the principles of physiology to school children meets with many obstacles. The faculty of conception of the pupil is as yet very imperfect, and the subject-matter extremely complex and difficult. This fact, alone, ought to exercise a certain restriction even upon the most prolific writers, but the truth is that hardly any field of knowledge is so thoroly swamped with elementary books as physiology.

The most evident deficiency of books of this class lies in the fact that they are written by "all-around scientists," rather than by professional physiologists. Consequently, they will

contain very few physiological facts, and a good deal of outside matter of purely popular origin, grouped under this most convenient, collective term, "physiology." They may be likened to "*vade-mecums*" of universal knowledge.

The latter statement may, also, be made regarding the book which I have before me. Its scope seems almost unlimited. Besides the ever-present voluminous chapters on the dangers of alcohol and smoking, it embraces, also, chapters on bacteriology and toxicology. Regarding the former, little can be said, because, however partially they may have been written, they are intended to serve a good purpose. But it seems to me that the readers to whom this book is addressed will hardly be sufficiently competent to cope with cases of poisoning of any kind. Such matters should not be made popular, but left entirely in the hands of medical men.

Certain chapters of the book, for example those on the circulation of the blood and digestion, may be considered as fairly complete for a treatise of this kind. They contain few erratic statements, and altho the drastic comparisons frequently drawn between physiological phenomena and mechanical devices are often extremely "vivid," a certain allowance should be made for them, considering the age of the readers for whom the book is intended. The same may be said regarding many of the illustrations. Their unusual appearance and schematic presentation are, as a rule, more in evidence than their absolute correctness.

Other chapters, like those on the nervous system, the senses, and secretion, are extremely elementary. Pure physiological facts are few and scattered, and, at times, not in accord with modern research. This seems surprising, because the literature concerning the function of these parts is very large, and at the same time sufficiently definite for the selection of numerous facts which, undoubtedly, would be of interest even to young readers.

In general, the book now under consideration does not rise above the standard set by earlier treatises of a similar nature.

R. Burton-Opitz

Columbia University

XI

NOTES AND NEWS

The Avoidance of Narrowness

Dr. William Osler, Professor of Medicine in the Johns Hopkins University, in a recent address before the medical students of the University of Toronto, uttered words of warning to the professional students of to-day that ought to be heard far and wide. In speaking of the tendency of the modern specialist toward narrowness, Dr. Osler said:

Professional work of any sort tends to narrow the mind, to limit the point of view, and to put a hall-mark on a man of a most unmistakable kind. On the one hand are the intense, ardent natures absorbed in their studies and quickly losing interest in everything but their profession, while other faculties and interests 'fust' unused. On the other hand are the bovine brethren, who think of nothing but the treadmill and the corn. From very different causes, the one from concentration, the other from apathy, both are apt to neglect those outside studies that widen the sympathies and help a man to get the best there is out of life. Like art, medicine is an exacting mistress, and in the pursuit of one of the scientific branches, sometimes, too, in practice, not a portion of a man's spirit may be left free for other distractions, but this does not often happen. On account of the intimate personal nature of his work, the medical man, perhaps more than any other man, needs the higher education of which Plato speaks,—"that education in virtue from youth upwards, which enables a man eagerly to pursue the ideal perfection." It is not for all, nor can all attain it, but there is comfort and help in the pursuit, even tho the end is never reached. For a large majority the daily round and the common task furnish more than enough to satisfy their hearts' desire, and there seems no room left for anything else. Like the good, easy man whom Milton scores in the *Areopagitica*, whose religion was a "traffic so entangled that of all mysteries he could not skill to keep a stock going upon that trade" and handed it over with all the locks and keys to "a divine of note and estimation," so is it with many of us in the matter of this higher education. No longer intrinsic, wrought in us and ingrained, it has become, in Milton's phrase, a "dividual movable," handed over nowadays to the daily press or to the haphazard instruction of the pulpit, the platform, or the magazines. Like a good many other things, it comes in a better and more enduring form if not too consciously sought, The all-important thing is to get a relish for the good company of the race in a daily intercourse with some of the great minds of all ages. Now, in the springtime of life, pick your intimates among them, and begin a systematic cultivation of their works. Many of you will need a strong leaven to raise

you above the level of the dough in which it will be your lot to labor. Uncongenial surroundings, an ever-present dissonance between the aspirations within and the actualities without, the oppressive discords of human society, the bitter tragedies of life, the *lacrymæ rerum*, beside the hidden springs of which we sit in sad despair—all these tend to foster in some natures a cynicism quite foreign to our vocation, and to which this inner education offers the best antidote. Personal contact with men of high purpose and character will help a man to make a start—to have the desire, at least, but in its fullness this culture—for that word best expresses it—has to be wrought out by each one for himself. Start at once a bedside library and spend the last half hour of the day in communion with the saints of humanity. There are great lessons to be learned from Job and from David, from Isaiah and St. Paul. Taught by Shakspere you may take your intellectual and moral measure with singular precision. Learn to love Epictetus and Marcus Aurelius. Should you be so fortunate as to be born a Platonist, Jowett will introduce you to the great master thru whom alone we can think in certain levels, and whose perpetual modernness startles and delights. Montaigne will teach you moderation in all things, and to be "sealed of his tribe" is a special privilege. We have in the profession only a few great literary heroes of the first rank, the friendship and counsel of two of whom you cannot too earnestly seek. Sir Thomas Browne's *Religio medici* should be your pocket companion, while from the Breakfast Table Series of Oliver Wendell Holmes you can glean a philosophy of life peculiarly suited to the needs of a physician. There are at least a dozen or more works which would be helpful in getting that wisdom in life which only comes to those who earnestly ask for it.

A conscientious pursuit of Plato's ideal perfection may teach you the three great lessons of life. You may learn to consume your own smoke. The atmosphere of life is darkened by the murmurings and whimperings of men and women over the non-essentials, the trifles that are inevitably incident to the hurly-burly of the day's routine. Things cannot always go your way. Learn to accept in silence the minor aggravations, cultivate the gift of taciturnity, and consume your own smoke with an extra draft of hard work, so that those about you may not be annoyed with the dust and soot of your complaints. More than any other the practitioner of medicine may illustrate the second great lesson, that we are here not to get all we can out of life for ourselves, but to try to make the lives of others happier. This is the essence of that oft-repeated admonition of Christ, "He that findeth his life shall lose it, and he that loseth his life for my sake shall find it," on which hard saying if the children of this generation would only lay hold, there would be less misery and discontent in the world. It is not possible for anyone to have better opportunities to live this lesson than you will enjoy. The practice of medicine is an art, not a trade; a calling, not a business; a calling in which your heart will be exercised with your head. Often the best part of your work will have nothing to do with potions and powders, but with the exercise of an influence of the strong upon the weak, of the righteous upon the wicked, of the wise upon the foolish. To you as the trusted family counselor the father will come with his anxieties, the mother with her hidden grief, the daughter with her trials, and the son with his follies. Fully one-

third of the work you will do will be entered in other books than yours. Courage and cheerfulness will not only carry you over the rough places of life, but will enable you to bring comfort and help to the weak-hearted, and will console you in the sad hours when, like Uncle Toby, you have "to whistle that you may not weep."

And the third great lesson you may learn is the hardest of all—that the law of the higher life is only fulfilled by love or charity. Many a physician whose daily work is a daily round of beneficence will say hard things and will think hard thoughts of a colleague. No sin will so easily beset you as uncharitableness toward your brother practitioner. So strong is the personal element in the practice of medicine, and so many are the wagging tongues in every parish, that evil-speaking, lying, and slandering find a shining mark in the lapses and mistakes which are inevitable in our work. There is no reason for discord or disagreement, and the only way to avoid trouble is to have two plain rules. From the day you begin practice never, under any circumstances, listen to a tale told to the detriment of a brother practitioner. And when any dispute or trouble does arise, go frankly, ere sunset, and talk the matter over, in which way you may gain a brother and a friend. Very easy to carry out, you may think! Far from it; there is no harder battle to fight. Theoretically there seems to be no difficulty, but when the concrete wound is rankling, and after Mrs. Jones has rubbed in the cayenne pepper by declaring that Dr. J. told her in confidence of your shocking bungling, your attitude of mind is that you would rather see him in Purgatory than make advances towards reconciliation. Wait until the day of your trial comes and then remember my words.

Music and Art as College Studies

President Seelye of Smith College, in his last annual report, discusses the place of music and art in the scheme of collegiate study for women. He says:

The most noteworthy change in the curriculum has resulted from the abolition of Music and Art Schools as separate organizations, and the co-ordination of music and art with the other collegiate studies.

From the opening of the College, the Trustees have taken the ground that music and the fine arts are worthy of an honored place in the higher education of women, and that their importance justifies their recognition among those subjects which may properly be pursued for the attainment of the degree of bachelor of arts. The Trustees, accordingly, made provision for instruction in these branches as in other studies, and Smith College was among the first, if not the first of American institutions to reckon proficiency in music and art among the qualifications for an A. B. In the early poverty of the College it did not seem possible to make adequate provision for such instruction as was needed in those subjects for the academic students alone. Affiliated schools of art and music were accordingly established in which all members of the College should have the privilege of instruction, and to which special students, not candidates for a degree, might

be admitted. The plan worked successfully for several years. Music Hall, with its extensive equipment of musical instruments, became the center of a high order of musical culture, and the Hillyer Art Gallery, with a collection of sculpture and painting that was perhaps unequaled in any other college, became the seat of a flourishing school of art. The beneficial influence of the work done in these schools has been felt in all departments. They have greatly assisted in elevating and refining the student life. With the rapid growth of the academic body, it became, however, increasingly difficult to care for the special students in these schools. They could not be accommodated in the college dwelling-houses, and they generally lacked the broader preparatory training which would fit them to enter the academic classes. The rise of distinctive schools of music and art in large cities diminished the membership in these affiliated schools, until the income from them was so much less than the expenditure, and the embarrassment of adjusting the relations of the different teachers and students was so frequent, that it became a serious question whether it would not be better to discontinue them altogether, and to co-ordinate their work with the other departments. A committee of the Trustees appointed to investigate their condition reported in favor of their discontinuance at the end of this collegiate year. Altho that report was adopted, there was no intention of diminishing the facilities which the College has hitherto granted for the study of music and art. The advantages which have been gained in consequence of their recognition are too great to be relinquished. It was hoped, by the change, these departments could be conducted with less embarrassment, and still greater opportunities could be given for culture in music and art. Of course, if these studies are given a place in the college curriculum, they should be conducted in accordance with academic ideals, and they should be taught as thoroly, and on the same high plane, as the other studies with which they have been co-ordinated. Much of the contempt with which such studies have been viewed by educators is due to the fact that they have been pursued in a superficial and an elementary way, as an amusement or ornamental accomplishment. In college they are worthy of a different treatment, and Smith has aimed, by rigid tests of scholarship and by thoro study of their theory, history, and classic works, to make them important elements in a liberal education. Few subjects are more intimately associated with intellectual culture and progress than music, painting, and sculpture, and few subjects are represented by greater intellectual creations. It is fitting that a liberal education should provide facilities for their study, and should not neglect entirely the cultivation of artistic talent.

In an address at the Harvard Teachers' Association President Eliot said, "Music is a culture subject if there is one in the world, and music was an element in the first course for the bachelor's degree of which we have any knowledge — '*Lingua, tropus, ratio, numerus, tonus, angulus, astra.*' I mention with pleasure we have this year admitted under the subjects which may be counted for admission, both to Harvard College and the Lawrence Scientific School, harmony as the elementary subject in music and counterpoint as the advanced."

Would it not be well if Smith, also, should recognize proficiency in music and art among the subjects which may be counted for admission to college,

as it is among the subjects which may be counted for a degree? Were colleges generally to take such a position, more inducement would be given to those who have exceptional artistic talent to take a college course, and both the colleges and the artists would profit by the broader culture which could thus be attained.

American readers may gain some idea of the state of feeling in Great Britain over the working of the Educational Act, and of the charges and counter-charges that are being made, from the following paragraph which appears in double-leaded type in the *School guardian* for December 5, 1903. The *School guardian* is the particular organ of the Church of England schools:

We cannot too strongly express our opinion as to the manner in which the Education Act is being worked in Wales. In some parts of the country, notably Merionethshire and Carmarthenshire, no quarter is being given to the unfortunate Church Schools. We hear of teachers being left without salaries and the children without fires, the local education authority in some cases altogether declining to pay, and in others writing and saying that the matter shall come before the next meeting of the local educational authority. Such promises will supply neither the teachers with food nor the children with warmth. We cannot but hope that righteous indignation at such a method of warfare will rouse every self-respecting man and woman thruout the country to protest against it. The National Society is anxious to do all it can to protect these schools, and no better Christmas gifts could be made than special contributions to the Temple Memorial Fund with a view to aiding the Welsh Schools, which are now bearing the brunt of the attack. If this outpost is lost, there is no doubt that it will be utilized as a strong position from which to attack English counties. How far the alleged Nonconformist grievance has any value may be realized from the fact that we are informed by the Rev. A. Owen-Evans, Diocesan Inspector for Bangor, that during the past fortnight he has examined sixteen schools in Merionethshire and Montgomeryshire, with 1071 children present, and not a single child withdrawn from the religious instruction.

German University Statistics

Hochschul-Nachrichten for November, 1903, contains the latest statistics of attendance at the higher educational institutions of Germany. The details as well as the totals are of much interest.

I. UNIVERSITIES

	Total	Matriculated Students	Theologians: Protestant	Theologians: Catholic	Law	Medicine	Philosophy	Foreigners
1. Berlin	6479[1])	5781	268	—	1717	976	2820	876
2. Bonn	2666	2491	74	321	749	242	1115	67
3. Breslau	1951	1794	61	299	523	204	707	41
4. Göttingen	1531	1441	98	—	406	150	787	99
5. Griefswald	836	798	117	—	240	197	244	37
6. Halle	1894	1741	329	—	436	180	796	146
7. Kiel	1101	1052	41	—	329	317	365	17
8. Königsberg	1044	948	82	—	329	196	341	75
9. Marburg	1383	1305	129	—	357	176	643	51
10. Münster	1283	1211	—	300	280	—	631	31
Prussia	**20168**[1])	**18562**	**1199**	**910**	**5366**	**2638**	**8449**	**1422**
11. Erlangen	966	937	155	—	316	201	265	25
12. München	4970	4696	—	161	1630	1003	1902	257
13. Würzburg	1346	1300	—	113	423	396	368	54
Bavaria	**7282**	**6933**	**155**	**274**	**2369**	**1600**	**2535**	**336**
14. Freiburg	2079	1962	—	205	791	433	533	128
15. Heidelberg	1884	1671	62	—	572	311	726	197
Baden	**3963**	**3633**	**62**	**205**	**1363**	**744**	**1259**	**325**
16. Giessen	1149	1092	74	—	198	327	493	53
17. Jena	900	841	50	—	193	131	467	79
18. Leipzig	4183	3605	262	—	1110	435	1800	406
19. Rostock	542	520	142	—	81	121	276	14
20. Strassburg	1191	1121	173	—	318	237	493	66
21. Tübingen	1546	1506	290	191	379	207	439	30
Other German States	**5911**	**8685**	**791**	**191**	**2279**	**1456**	**3968**	**648**
Total	**40924**	**37813**	**2207**	**1580**	**11377**	**6438**	**16211**	**2731**

II. TECHNICAL HIGH SCHOOLS.

	Total	General Course	Architecture	Civil Engineering	Mechanical Engineering	Chemistry	Other Subjects	General Subjects	Five Years
1. Aachen	753	585	52	68	167	43	239	16	134
2. Berlin	3812	3008	453	591	1334	193	431	6	314
3. Hannover	1704	1252	159	308	499	81	195	10	147
Prussia	**6269**	**4845**	**664**	**967**	**2000**	**317**	**865**	**32**	**595**
4. Braunschweig	514	360	32	76	120	67	64	1	69
5. Darmstadt	1871	1814	246	258	590	175	515	30	475
6. Dresden	1212	932	128	269	334	164	—	37	267
7. Karlsruhe	1659	1481	253	232	457	180	351	8	375
8. München	2851	2379	343	705	1007	146	59	119	468
9. Stuttgart	872	893	162	182	317	99	27	16	88
Other German States	**8980**	**7769**	**1164**	**1722**	**2825**	**831**	**1016**	**211**	**1760**
Total	**15249**	**12614**	**1828**	**2689**	**4825**	**1148**	**1881**	**243**	**2355**

[1] There are also 4808 persons who attend lectures as auditors.

There is every reason to look forward with confidence to an unusually valuable meeting of the National Educational Association at St. Louis next summer, particularly if the dates finally decided upon are the earliest of those now under consideration. It is too much to expect that the enrolled attendance will equal, or rival, that at Boston; but, on the other hand, the presence of the best arranged and most representative educational exhibit yet brought together will be at once a great attraction and a guide to the making of an exceptional program. The Exposition authorities have demonstrated, both in their official classification and by their provision of a separate and adequate building, the strength of their conviction as to the primary importance of education; and they have earned, and deserve, the support of the teachers of the United States in making the Exposition a pronounced success.

The great International Congress of Arts and Sciences, to take place on September 19 and the following days, will bring together hundreds of the leading scholars and men of science from all parts of the world. This, of itself, will give to the St. Louis Exposition a unique and enviable distinction.

The very impressive and learned address on "A Constitutional and educational solution of the negro problem," by Regent Charles A. Gardiner of New York, delivered at the University Convention in July last, has been issued in pamphlet form. It deserves, and requires, most careful study.

Among the eminent European educationists who plan to visit America next summer are M. Gabriel Compayré, Professor Wilhelm Rein, and Professor Michael E. Sadler. Professor Paulsen of Berlin had hoped to come, but cannot.